SEMIANNUAL REPORT TO THE CONGRESS

number 6 • october 1, 1991 - march 31, 1992



National Science Foundation

Semiannual Report to the Congress

october 1, 1991 — march 31, 1992

NATIONAL SCIENCE FOUNDATION • OFFICE OF INSPECTOR GENERAL

his is our sixth Semiannual Report to the Congress, and it describes our activities and accomplishments for the first half of fiscal year 1992. Section 5 of the Inspector General Act of 1978, as amended, requires that the National Science Board transmit this report to the Congress within 30 days of its receipt, along with any comments the Board may wish to make.

This report highlights a number of key issues facing the Foundation, such as compliance with the Chief Financial Officers Act, financial oversight of NSF grants at large institutions, and the timeliness of audit resolution. These issues, combined with the background data and discussion of misconduct in science, will help place the structure, challenges, and workload of our audit, investigative, and oversight offices in proper perspective.

We appreciate the continued support and interest the National Science Board has shown in our work. We would particularly like to acknowledge the sustained assistance and strong support of our efforts by Dr. Mary Good, former Chair of the National Science Board. Dr. Good oversaw this office during its first 2-1/2 years of operation and provided the perspective and guidance that set high standards for OIG from its inception.

Linda G. Sundro Inspector General April 30, 1992 LETTER TO THE
NATIONAL SCIENCE
BOARD AND THE
CONGRESS

EXECUTIVE SUMMARY

uring this reporting period, we began a 2-year program aimed at assessing the adequacy of financial administration of NSF grants at large research institutions. The program was initiated as a result of hearings held by the Senate Committee on Governmental Affairs. Preliminary audit results indicate that we may develop findings that will help the Foundation improve the administration of NSF programs. (See pages 26 and 27.)

We also reviewed actions taken by the agency on costs questioned by OIG audit reports. We assessed the timeliness of resolution, the basis for decisisons allowing questioned costs, and whether weaknesses exist in the audit resolution process. Overall, we found the timeliness of resolution activities has improved. In most cases, questioned costs were allowed because the auditee provided adequate justification for the claimed costs. NSF has changed its audit resolution system, and these changes are producing positive results. (See pages 4 and 5.)

To comply with the Chief Financial Officers Act of 1990, NSF designated a chief financial officer and prepared and submitted a financial statement on the Agency's Trust Account to the Director of the Office of Management and Budget. We are auditing this financial statement, as required by the Act. (See pages 9 and 10.)

We investigated an allegation that an NSF employee had influenced contracts in favor of a specific NSF contractor, who had hired the employee's spouse as a subcontractor. Federal law prohibits federal employees from participating in contracts in which their spouses have financial interest, unless an appropriate waiver is obtained. We concluded that, without obtaining a waiver, the employee had participated in contract actions while knowing about the spouse's financial interest and had concealed the spouse's relationship with the contractor from the agency. We referred this case to the U.S. Attorney's Office, and while the case was being evaluated for prosecution, the employee resigned. (See pages 15 and 16.)

We reviewed NSF's enforcement of the Antarctic Conservation Act of 1978. The Act generally prohibits any U.S. citizen in Antarctica from harming the ecology of Antarctica, and violation of the Act can result in civil and criminal sanctions. We found that the Division of Polar Programs was informally handling violations of the Act, and its decisions had been fair and in keeping with provisions in the Act. However, we recommended that NSF consider, in every serious violation of the Act, suspension and debarment as an additional or alternative action. We also recommended that NSF modify its contracts, grants, and permit forms to help NSF initiate enforcement actions. (See pages 25 and 26.)

CONTENTS

Reporting Requirements

Page 1

Investigations

13

Summary of Investigative Activities

Summary of Significant Cases During This Reporting Period

Conflict-of-Interest Allegations

Audits

3 External Audit

Introduction

Recent Activities

Audit Resolution

Significant Audit Work

Audit Involving Possible Violations of Law

9 Internal Audit

Introduction

Chief Financial Officers Act Requirements and Audit Process

NSF Recommends Manufacturer of Personal Computers Over Other Brands

Peer Review In-Process for OIG

Summary of Other Internal Audit Efforts

Assistance Provided to Other Offices of Inspector General

Oversight Activities

17

Misconduct in Science and Engineering

Significant Misconduct Cases

Followup on Previous Significant Cases

Conflicts of Interest

Oversight of NSF Programs

Representational Activities

Legal Issues

25

Enforcement of the Antarctic Conservation Act

Congressional Hearing on Audits of NSF Grants

Summary of Other Legal Issues

- 28 Significant Audit Recommendations From Previous Semiannual Reports
- 32 Reports With Outstanding Management Decisions
- 36 Inspector General's Disagreement With Significant Management Decisions
- 36 Agency Refusals to Provide Information or Assistance
- 36 Significant Management Decisions Which Were Revised

List of Audit Reports

- 37 External Audit
- 42 Internal Audit
- 43 Oversight

Statistical Table of Inspector General

Issued Reports With Questioned Costs

Page 45

Glossary

Inspector General Reports

With Recommendations That Funds Be Put To Better Use

Page 46

REPORTING REQUIREMENTS

The table below cross-references the reporting requirements prescribed by the Inspector General Act of 1978, as amended, to the specific pages in the report where they are addressed.

Requirement		
Section 4(a)(2)	Review of Legislation and Regulations	25
Section 5(a)(1)	Significant Problems, Abuses, and Deficiencies	Throughout
Section 5(a)(2)	Recommendations With Respect to Significant Problems, Abuses, and Deficiencies	Throughout
Section 5(a)(3)	Prior Significant Recommendations on Which Corrective Action Has Not Been Completed	32
Section 5(a)(4)	Matters Referred to Prosecutive Authorities	13
Section 5(a)(5)	Summary of Instances Where Information Was Refused	36
Section 5(a)(6)	List of Audit Reports	37
Section 5(a)(7)	Summary of Each Particularly Significant Report	Throughout
Section 5(a)(8)	Statistical Table Showing Number of Reports and Dollar Value of Questioned Costs	46
Section 5(a)(9)	Statistical Table Showing Number of Reports and Dollar Value of Recommendations That Funds Be Put To Better Use	47
Section 5(a)(10)	Summary of Each Audit Issued Before This Reporting Period for Which No Management Decision Was Made by End of the Reporting Period	32
Section 5(a)(11)	Significant Revised Management Decisions	36
Section 5(a)(12)	Significant Management Decisions With Which the Inspector General Disagrees	36

AUDITS

n September 1991, the Senate Committee on Governmental Affairs held a hearing on the effectiveness of governmental oversight of NSF grants. (For further details on the testimony, see page 26). Under the Single Audit Act, audits of federal grants at major research institutions are conducted by a single "cognizant" agency designated by the Office of Management and Budget (OMB). For NSF grantees, the cognizant agency is usually the Offices of Inspector General at the Department of Health and Human Services (HHS) or the Department of Defense (DoD).

The Senate Committee and the General Accounting Office (GAO) specifically questioned whether audits of universities conducted by HHS and DCAA using "single audit" guidelines provide adequate review of expenditures under NSF grants. Given our limited resources, it has been OIG policy to audit grantees for which we are not cognizant only in those situations where a specific allegation or issue warrants a "for cause" audit. The Senate hearing raised concerns about whether this practice results in adequate oversight of large grantees' expenditures for research.

At the Senate Committee's request, and after consultation with the National Science Board, we agreed to monitor university-wide audits conducted by HHS and DCAA more aggressively. We also agreed to initiate a 2-year pilot program to determine whether, and to what extent, OIG should use audit resources to conduct audits of NSF grants at universities where HHS and DoD have "single audit" responsibility.

We began our 2-year pilot program in this reporting period. As part of this program, we will audit approximately 25 grants at the 8 universities that are among the largest NSF grant recipients. At each university, we will audit grants that are funded by one of two NSF programs. By limiting our review to two NSF programs, we hope to develop findings and/or identify questioned costs that reveal areas in which the administration of a specific NSF program, or the overall management of NSF programs, can be improved.

Our audits will review costs charged directly to NSF grants and will focus on those cost and compliance issues that are particularly important to NSF. Our review of indirect cost rates will be limited to determining whether rates were applied in accordance with indirect cost agreements negotiated between the cognizant agencies and the universities.

Preliminary audit results indicate that we may develop findings that will assist NSF management in improving the administration of NSF programs. For example, we have found that universities do not always implement procedures to ensure that funds are spent in accordance with grant objectives or obtain proper approval from NSF to change the principal investigator's level of effort on a grant. In addition, final project reports on the accomplishments of grants are not always completed, and cost-sharing reports are not compiled to ensure that a university has fulfilled minimum cost-sharing requirements. We also found that two of the four universities we visited had not recently conducted their own systemwide audits. As a result, we could not determine whether audits of this kind are likely to identify information that would be useful to NSF. The two universities that did conduct system-wide audits had findings that were germane to NSF. However, those audits did not cover all of our concerns.

Because our audit program is in its first phase and our findings are preliminary, it is too early to determine the amount of costs directly charged to NSF grants by these universities that we will question. Similarly, we are not yet able to identify those areas, if any, where focused audits by our office would be a productive supplement to the cognizant audit work conducted by HHS and DCAA. We will report on our findings

from this pilot program in upcoming reports.

The following sections describe audit efforts that resulted in significant findings in such areas as improving internal controls, questioned costs, and noncompliance with federal requirements.

EXTERNAL AUDIT

Introduction

The Office of External Audit is responsible for ensuring that audits of grants, contracts, and cooperative agreements funded by NSF's programs and operations are performed. External Audit conducts financial audits that include a review of accounting records and other financial information to assist NSF management in determining whether the amounts claimed or billed for direct and indirect costs are reasonable and allowable and the grantee or contractor has complied with laws and regulations under which funding was provided. Reviews of NSF grants and contracts at most educational institutions are performed by independent public accountants under the oversight of the HHS' OIG. Reviews of commercial firms and nonprofit organizations are performed by NSF's OIG staff, public accountants under contract with OIG, and DCAA.

All audit reports processed by the OIG are referred to NSF management for action or information. The Office of External Audit also provides advice and assistance to NSF's Division of Grants and Contracts (DGC) in its resolution of the recommendations resulting from the reviews. In addition to the assistance provided for activities directly related to audits, External Audit also assists NSF by acting as a liaison between NSF and audit groups from the private sector and other federal agencies, arranging for special reviews, obtaining information, and providing technical advice.

Recent Activities

During this reporting period, the Office of External Audit conducted a review of NSF's audit resolution process. The review identified the amount of time needed for resolution, analyzed the agency's reasons for allowing questioned costs, reviewed the mechanisms for converting questioned costs into disallowed costs, and made suggestions for strengthening the resolution process.

We also:

- began financial and compliance reviews at eight major universities in response to GAO's review of NSF grant management,
- reviewed a major contractor that provides services to NSF at an overseas location,
- audited a cooperative agreement that supports the NSFNET Backbone Network,
- served on the interagency committee for implementation of OMB Circular A-133,
- received and processed audit reports produced in accordance with Circular A-133 and served as the oversight agency for those grantees,
- conducted financial and compliance audits of grantees, and
- spoke at public seminars for small businesses on how to prepare for a federal audit.

In addition, we processed 158 audit reports. Cognizant audit agencies conducted 106 of these audits, and public accountants under contract to OIG conducted 22. OIG staff conducted audits and reviews that resulted in the issuance of 30 reports. In addition to conducting our own audits, NSF provided guidance, review, and processing of OMB A-133 reports for grantees.

TABLE 1						
	Cognizant Auditors	Public Auditors	OIG Auditors	Total Report		
10-01-91 to 03-31-92	106	22	30	158		
04-01-91 to 09-30-91	100	29	17	146		
10-01-90 to 03-31-91	99	29	18	146		
04-01-90 to 09-30-90	89	28	18	135		
10-01-89 to 03-31-90	144	42	6	192		
04-01-89 to 09-30-89	87	28	1	116		

Table 1 shows the total number of reports issued by cognizant auditors, public auditors, and OIG auditors since April 1989.

AUDIT RESOLUTION

In our previous semiannual reports, we expressed our concern about the amount of time it took NSF management to resolve audit recommendations. NSF has a significant number of audit reports that have not been resolved within 1 year of issuance. OMB requires that audit recommendations be resolved within 6 months of report issuance. We conducted the review in October and November 1991. Since then, we have discussed our findings with NSF management responsible for audit resolution.

Review of Audit Resolution

Our review concentrated on (1) determining the time required to resolve questioned costs in audit reports, (2) identifying the basis for management's decision not to disallow certain questioned costs, (3) identifying the actions taken by auditees when questioned costs were disallowed, and (4) analyzing whether weaknesses exist in the audit resolution system that need to be improved.

Of the approximately 164 audit reports resolved between April 1, 1989, and September 30, 1991, 66 reports (about 40 percent) took 12 months or longer to come to closure. The number of reports resolved in the first 6 months after issuance increased from 19.4 percent for the first OIG reporting period (April 1 to September 30, 1989) to 42.4 percent in the last reporting period (April 1 to September 30, 1991). In addition,

unresolved reports over a year old decreased from 54.8 percent in the first reporting period to 36.4 percent in the last reporting period. Overall, statistics support that the timeliness of resolution activities has improved.

We found that 47 percent of questioned costs was disallowed. However, one unusually large questioned and subsequently disallowed amount skewed the percentage upward. As a result, we believe that a more representative calculation of questioned costs that are ultimately disallowed is closer to 36 percent. We found that auditees were required to repay NSF 80 percent of the disallowed costs. In other cases, auditees were allowed to substitute unclaimed costs as offsets to the disallowed costs.

We found that most of the questioned costs that were not disallowed were accepted because the auditee provided additional information justifying the claimed costs. Other explanations for allowing questioned costs included; recalculation and reaudit of the questioned costs, post-audit award actions and approvals that affected the amounts of questioned costs, acceptance of the questioned costs based on actions by the auditee after the periods reviewed, and acceptance of the questioned costs based on reasonableness of expenditure or equity.

We recommended that management (1) provide a clearer definition of the documentation that must be completed and maintained by DGC to support questioned costs; (2) provide written definitions so that classification of sustained and unsustained costs is easier; and (3) require that DGC and OIG agree on a common method of handling the special instances of questioned costs that occur in preaward audit reports, indirect cost audits, and reports that have findings on interest that was not repaid to the government. NSF management has made changes to the audit resolution system, and we believe these changes are producing positive results.

Management Action

We are pleased to report that during this reporting period, NSF made significant progress in reducing the number of audit reports with outstanding management decisions. NSF management established a task force to concentrate on resolving outstanding audits and to improve the timeliness of resolution activities in accordance with OMB requirements. NSF management also emphasized its recognition of the importance of this activity by reorganizing the audit resolution unit and increasing staffing of that unit. These efforts resulted in a significant reduction in the number of audit reports with outstanding management decisions over 6 months. The total number of outstanding reports decreased from 91 to 52 during this period. The remaining 52 unresolved reports include 27 reports issued during this reporting period.

Significant Audit Work

The following sections briefly discuss the results of our reviews of grantees. These reviews disclosed deficient accounting procedures, unsupported and unreasonable costs, and insufficient management of grants.

Two Awardees Under the Small Business Innovative Research Program Reviewed

NSF awarded grants to two commercial companies under this program. We reviewed these grants and found the following deficiencies:

NSF awarded three grants for an aggregate \$618,304 to a commercial company to improve orthopedic implants and prosthetic devices. We questioned \$62,005 in costs because the company did not comply with federal guidelines; charged the grant excessively for indirect costs, fees, unapproved travel, and subcontract costs; and had an inadequate accounting system. We recommended that NSF recover the questioned costs and require that the grantee comply with federal policies.

NSF also awarded two grants for an aggregate \$277,730 to a second commercial company that provides technical services in civilengineering risk analyses and reliability assessments. We questioned \$275,089 in costs because the company's accounting system did not meet government standards, the company had internal control problems, and the company had failed to comply with other OMB standards. We recommended that NSF recover the questioned costs and require that the grantee improve the internal control structure.

Colorado Museum Charged Unsupported and Unreasonable Costs

NSF awarded a grant for \$496,211 to a Colorado museum to support the development of a series of permanent health exhibits that address how life begins, genetics, the five senses, nutrition, fitness, stress, and living with substances.

We questioned \$93,095 in costs because the museum did not maintain time and effort records in accordance with government guidelines. Although the grantee's

timesheets listed the total number of hours worked in a payroll period and provided the number of hours charged to leave and personal days taken, we could not determine how these hours were distributed to specific projects.

In addition, the museum had not offset the project's costs with project income, and it paid a contractor \$16,159 for administrative costs and profit for site preparation that the museum had actually performed.

We also found that the museum did not conduct an audit in accordance with federal requirements, and it had charged consultant services at a higher daily rate than allowed under federal guidelines.

We recommended that NSF recover the questioned costs and require that the grantee comply with federal policies.

Poor Management of NSF Grants

NSF awarded two grants totaling \$487,213 to a California not-for-profit foundation to support a program to improve science, mathematics, and computer science teaching to disabled and nondisabled students and a program designed to improve the quality of science education for disabled and

non-english speaking students. We questioned \$39,894 of the \$108,106 reviewed.

We conducted an interim audit and found that although none of the individual deficiencies or questioned costs were a significant portion of the claimed costs, compliance and internal control findings accounted for 36 percent of claimed costs. Auditors found the following questionable practices and internal control deficiencies:

- Claimed costs were not outlined in the grant budget or approved by NSF and were not supported by canceled checks.
- Claimed labor costs exceeded costs supported by timesheets.
- Claimed professional service costs exceeded actual expenditures and were not supported by timesheets.

In addition, the foundation had not:

- participated in the cost sharing specified in the grant award,
- remitted interest on excess funds to NSF,
- developed written accounting policies and procedures,
- developed documented procedures to ensure a drug-free workplace, or

 executed a subcontract agreement for services at an academic institution.

The foundation also had inadequate timekeeping procedures and had requested and received advance payments exceeding its needs.

We recommended that NSF recover the questioned costs and require that the grantee comply with federal policies.

Nonprofit Fails to Support Claimed Costs

NSF awarded three small grants for an aggregate \$199,194 to a nonprofit corporation to support graduate programs for minority students. The grantee claimed \$124,194, and we questioned \$74,225.

Our audit found that the grantee did not adequately document expenditures for salaries and wages, fringe benefits, travel costs, and publication costs.

The audit disclosed that funds reserved for participant support costs were used for ineligible costs, and subcontract costs were charged to NSF programs even though they had been incurred in support of other programs.

In addition, the grantee had not maintained adequate controls within its financial management system to properly authorize purchases. The grantee's management staff approved check requisitions without specifying a payee or an amount to be expended.

We recommended that the grantee support and provide justification for the questioned costs or refund the money.

Otber Audits Of Grantees Conducted By External Audit

FIRM MAKES CLAIMS IN **EXCESS OF COSTS** INCURRED AND CEILING RATES: We audited an educational institution, which received a \$569,640 grant to research ways of increasing the use of federal statistical information on children, youth, and families. We questioned \$28,405 in costs. Our audit found that consultant costs claimed exceeded congressionally mandated ceilings: costs were not shared by the institution, as required by Congress; and personnel, fringe benefits, and indirect costs were claimed in excess of actual costs. In addition, the grantee's accounting system was inadequate to account for and accumulate all grant costs; the general ledger was not reconciled to reflect adjustments to the accounting records; duties relating to the payroll function were not properly separated; and there

were no written policies for accounting, property, purchasing, and travel. We recommended that NSF recover questioned costs and require that the grantee comply with federal policies.

CLAIMS REIMBURSE-MENT FOR NON-**BUDGETED ITEMS: NSF** awarded three grants for an aggregate \$241,570 to a not-for-profit association of engineers that provides services to about 70,000 members. We questioned \$4,184 in costs because: the cost of meals was charged to a grant; indirect costs exceeding allowable amounts were charged to the grant; and salaries, fringe benefits, and indirect costs were not provided for in the award budget. The association had also accumulated cash in advance of expenses; interest earned on excess cash balances was not remitted to NSF; and documentation was not maintained for cost or price analyses. We recommended that NSF recover the questioned costs and require that the grantee comply with federal policies.

FOR-PROFIT HAS INTERNAL CONTROL **DEFICIENCIES: NSF** awarded a Virginia for-profit organization two grants to develop software for electric power engineering and to conduct a workshop. Claimed costs were \$113,441, we questioned \$1,542. Auditors found that salary and wage costs exceeded allowable amounts and that the grantee had some internal control deficiencies. We recommended that NSF recover the excess salary costs and require the improvement of the internal control structure.

FACILITY REVIEW IDENTIFIES DEFI-CIENCIES: We conducted an on-site review of leased facilities under NSF's Antarctic program. We found that NSF had overpaid \$25,995 to a foreign contractor for interior finishing work and paid over \$38,080 for unused rental space. The contractor also gained \$8,750 in currency exchanges for FY 1991. We recommended that NSF recover all payments, establish an exchange rate more consistent with the current actual exchange rate, and begin to use the leased space or terminate the lease agreement.

Audit Involving Possible Violations of Law

When conducting audits, we sometimes observe or are advised of possible violations of law involving the use of NSF funds. In this reporting period, we began one audit with the assistance of our legal and investigative colleagues. The following summary discusses an ongoing audit of an alleged embezzlement of funds.

Grantee Embezzles Funds

NSF awarded a grant to a not-for-profit organization for the support of a regional center. The first year grant amount was \$507,000, with the expectation that subsequent year funding would total approximately \$4 million.

A contract auditor initially visited the grantee and found that the grantee's records were not orderly. The auditor did not identify any indication of impropriety. However, after the auditor left the audit site, OIG received a letter from the grantee's finance/marketing manager stating that he had been dismissed. OIG also received an allegation that funds had been embezzled. As a result of the allegation, audit work was suspended so that a criminal investigation could be conducted. As a result of the investigation, the finance/marketing manager admitted embezzling \$30,500. Our audit has resumed, and final results will be reported when work is complete.

INTERNAL AUDIT

Introduction

Internal Audit is one of two operational components in the Office of Internal Audit and Investigations. Internal Audit is responsible for reviewing and evaluating the financial, administrative, and programmatic aspects of NSF activities. These responsibilities also include evaluating internal controls, reviewing data processing systems, examining allegations of improper actions by NSF staff, performing inspections, and following up on the implementation of recommendations included in NSF audit reports.

Chief Financial Officers Act Requirements and Audit Process

The Chief Financial Officers Act of 1990 is intended to improve the overall financial management and accountability in the federal government. The Act's objectives are to: (1) bring more effective general and financial management practices

to the federal government through statutory provisions; (2) improve systems of accounting, financial management, and internal controls to ensure the issuance of reliable financial information and to deter fraud, waste, and abuse of government resources; and (3) provide for the production of complete, reliable, timely, and consistent financial information for the executive branch and Congress in financing, managing, and evaluating federal programs. NSF was included in this legislation along with 22 other cabinetlevel departments and independent agencies.

The Act requires that:

- NSF designate a Chief Financial Officer (CFO) who is the focal point for the agency's financial management. The CFO reports to the NSF Director on financial management matters: oversees financial management activities; develops and maintains an integrated agency accounting and financial management system; and directs, manages, and provides policy guidance and oversight of agency financial management personnel, activities, and operations.
- NSF prepare and submit to the Director of OMB by March 31 of each year, a financial statement on its Donations Account (Trust

Fund) activities for the preceding fiscal year. NSF's first submission was due in March 1992. The annual financial statement submission, as specified by OMB, includes: an overview of the reporting entity, principal statements, notes to principal statements, combining statements, and supplemental financial and management information.

• The Inspector General audit the financial statement, prepared and submitted by NSF. in accordance with applicable generally accepted government auditing standards and issue a report to the agency head by June 30 of each year. The auditing standards require three separate reports: (1) an independent auditors' report, (2) an internal control report that describes weaknesses identified, and (3) a compliance report.

Compliance with the Act's financial reporting and audit requirements has placed an increased burden on the resources of both the CFO and the Office of Inspector General. OIG has spent a substantial amount of time working with NSF management to ensure that the form and content of the financial statement comply with the Act. The Act's implementation process has generated six questionnaires and surveys from Congress and OMB. The time required to respond to the

questionnaires and surveys has been significant and a strain on resources for our office. However, we expect to meet the reporting milestones established by the Act and report on any findings that may result from our audit in our next semiannual report.

NSF Recommends Manufacturer of Personal Computers Over Other Brands

NSF employees depend on personal computers (PC) to perform most ordinary administrative functions. From July 1, 1991, through December 31, 1991, NSF organizations spent approximately \$1.05 million for PCs. As of September 30, 1991, NSF had a total inventory of 1,976 PCs, which equates to about 1.5 PCs per employee.

NSF's Division of Information Systems (DIS) is responsible for all NSF computer systems. DIS encourages NSF to maintain standardization for interactive systems as well as the maintenance of hardware for PCs. In 1989, DIS recommended that the agency only purchase PCs from a specific manufacturer.

We received questions and complaints from employees about the DIS recommendation. We reviewed the process used by NSF management to make this recommendation and evaluated what actions

management should take in response to the employees' questions and concerns. Our review focused on:

- the original selection process used by DIS in 1989 to choose which manufacturer's PCs would replace the ITT brand;
- DIS' policy for periodically recertifying the recommended brand; and
- NSF's current practices for procuring PCs to determine whether the procedures used ensure that purchases are reasonable, competitive, and the most advantageous to the government.

We determined that DIS' original 1989 recommendation was reasonable. NSF developed a distributed automated data processing (ADP) equipment plan that promoted a gradual upgrade or replacement program for the installed base of older PCs. A group developed specifications for the PCs and conducted a market survey to identify equipment that was compatible with NSF requirements and applications. DIS selected a particular brand of PC for NSF because of its performance reliability and the General Services Administration (GSA) schedule cost for PCs recommended by the market survey.

Since 1989, DIS has not conducted a formal review of the technology and costs of the many available PC brands. DIS has relied on its knowledge of new technologies and the marketplace, and it believes that the vendor identified in 1989 still supplies a high quality and economical PC that is compatible with NSF systems.

In late 1991, DIS analyzed current computer publications to evaluate the major brands of PCs regarding three major factors: technical assistance and on-site maintenance support, quality of the product according to computer publications, and the GSA schedule price. Our review of the DIS analysis determined that the procedures used by DIS need to be improved before they become the basis for future evaluations for recommending PC brands. NSF must regularly conduct formal evaluations of PCs to meet NSF's needs, promote competition, and ensure that purchases are advantageous to the government.

Our review considered three alternatives for future PC procurements. We recommended that an evaluation of GSA schedule equipment be performed at least annually to identify brands that are acceptable for NSF purposes and to limit the purchase of brands to those specifically identified. Our review recommended this alternative because it:

- reduced the risk of equipment not being technically competitive,
- allowed for new evaluations and selection of brands if warranted by major advancements in PC technology,
- provided for resources being used efficiently in the installation and maintenance of PCs throughout NSF,
- offered competitive pricing to the government, and
- gave assurance that current and future software and communications systems would function NSF-wide.

DIS and DGC agreed with, and acted upon, these recommendations.

Peer Review In-Process for OIG

During this reporting period, OIG's Offices of External and Internal Audit underwent their first peer review. A peer review is intended to provide an overall assessment of the quality of the audit function. The Coordinating Conference of the President's Council on Integrity and Efficiency (an association of Inspectors General appointed under the 1988 Amendment to the Inspector General Act of 1978) established a "Peer Review Committee" to address the legislative requirements for

external quality control reviews. In early 1991, we requested that the Peer Review Committee provide a team of auditors to review our operations. That review was conducted in the first quarter of calendar year 1992.

The Inspectors General of the Federal Deposit Insurance Corporation and the Federal Maritime Commission were assigned to conduct the on-site review. The review focused on external and internal audit operations and developed detailed information on quality control policies and procedures for conducting audits. The peer review team also conducted an in-depth review of individual reports, workpapers, and office activities. The results of the review, along with recommendations to improve our operations, will be provided to the Inspector General and the National Science Board when the review is completed.

Summary of Other Internal Audit Efforts

INTERNAL CONTROL REVIEW PROCESS: We reviewed NSF's compliance with the Federal Manager's Financial Integrity Act (FMFIA), OMB Circular A-123, and other OMB guidance. FMFIA requires that (1) the head of each federal agency establish and maintain adequate systems of internal

control and (2) each executive agency conduct annual evaluations of its control systems and report their status to the President and Congress. OMB Circular A-123, Internal Control Systems, prescribes the policies and procedures for establishing, evaluating, and reporting on internal controls and requires that a 5-year management control plan be prepared and updated annually. We found that NSF did comply with the FMFIA Act and OMB Circular A-123, except it did not update the 5-year management control plan annually. Management agreed to update the plan annually and monitor its progress on a regular basis.

LOBBYING RESTRIC-TIONS CERTIFICATIONS: Regulations implementing the Lobbying Restrictions Act require that the Inspector General submit to the Congress a yearly evaluation of NSF compliance with, and the effectiveness of, the requirements contained in the regulations. The Act is intended to prohibit recipients of federal contracts, grants, loans, or cooperative agreements from using appropriated funds for lobbying in connection with the contract, grant, loan, or cooperative agreement. We reviewed a statistical sample of the award actions that required certifications under the Act. We believe that NSF is complying with the Act's certification requirements and that agency procedures are

generally adequate to ensure that certifications are obtained from organizations before making awards. We made three recommendations for improving NSF's operational efficiency. Management concurred with the recommendations and has agreed to implement them.

Assistance Provided to Otber Offices of Inspector General

HEALTH BENEFITS PREMIUMS CLAIMED BY HEALTHPLUS: We assisted the Office of Personnel Management (OPM) in reviewing a claim by Health-Plus of Maryland for unpaid health benefits premiums. Our review disclosed (1) six instances of premium underpayments and three instances of premium overpayments to HealthPlus, (2) inadequate control procedures for maintaining a continuous inventory of enrollees by health plan, and (3) a need to improve procedures for monitoring and controlling overdue premiums. OPM, on behalf of the federal government, will negotiate the final settlement with HealthPlus, and NSF will take corrective action to improve its controls for monitoring health plan enrollees and controlling overdue premiums.

DoD INTERAGENCY
ORDERS: We received a
request from the Department of

Defense's (DoD) OIG to report on the number of interagency orders from DoD in the past 3 years. DoD found that some of its activities inappropriately used interagency orders to procure goods and services. DoD was also concerned that the number of interagency orders was increasing and that activities were circumventing the laws and regulations pertaining to competitive procurement. We found that NSF did not receive increased orders from DoD from FY 1989 through FY 1991. We provided DoD with a computergenerated report showing the amount, fiscal year, and DoD institutional element for each interagency order placed during that period. Our review of several of the awards did not indicate that activities circumvented competition.

INVESTIGATIONS

The Investigations Unit is the second operational component within the Office of Internal Audit and Investigations. It is responsible for investigating violations of criminal statutes as well as regulations involving NSF employees, grantees, contractors, and other individuals conducting business with NSF. The results of these investigations are referred to federal, state, or local prosecutors for criminal or civil prosecution, or to NSF's Office of the Director to initiate administrative sanctions or penalties.

TABLE 2			
Active Cases From Prior Reporting Periods	12		
New Allegations Received	19		
Total Cases	31		
Cases Closed After Preliminary Assessment	1		
Cases Closed After Inquiry/Investigation	13		
Total Cases Closed	14		
ACTIVE CASES	17		

SUMMARY OF INVESTIGATIVE ACTIVITIES

The Investigations Unit makes a preliminary assessment of the allegations it receives to determine if they should be investigated. Allegations that do not fall within OIG's investigative purview or that

are too ambiguous to follow up effectively with our limited resources are closed. Cases closed after a preliminary assessment may be reopened if additional information warrants such action. (See Tables 2 and 3 for a synopsis of our investigative activities.)

SUMMARY OF SIGNIFICANT CASES DURING THIS REPORTING PERIOD

Diversion and Misuse of Grant Funds

Since February 1989, we have received 26 allegations involving the diversion of NSF grant or contract funds for personal use. These diversion cases represent about 35 percent of our total cases. Deliberate diversion of NSF funds from their intended use is a criminal violation that can be prosecuted under several statutes. In addition, improper use of NSF funds may result in administrative actions, such as grant termination or recovery of federal funds. We investigate all allegations involving embezzlement, diversion, or other illegal use of NSF grant funds.

We received three diversion and misuse allegations that were anonymous and so vague that we were unable to identify the program, grant, or contract in which the alleged diversion or misuse

TABLE 3				
Referrals for Criminal Prosecution Pendi From Previous Period	ing 0			
New Referrals	2			
Prosecutorial Declinations	1			
Indictments From Previous Period	1			
New Indictments	0			
Criminal Convictions/Pleas	1			
REFERRALS PENDING	1			
INVESTIGATIVE RECOVERIES	29,473			
ADMINISTRATIVE ACTIONS	6			

occurred. As a result, we could not respond to these allegations. Currently, we are investigating five other allegations. We have completed investigations or reviews on 18 other allegations involving diversion or misuse of NSF grant funds.

Thirteen of the 18 allegations resulted in findings of questionable cost or improper action. In most cases, corrective action has been taken to improve administrative controls, issue administrative sanctions, or recover funds that were diverted or improperly used. Four of these allegations have ended with criminal convictions. To date, the government has recovered, or convicted defendants have agreed to return, about \$566,672 in NSF grant funds.

Based on our recommendations, NSF recently

amended the terms and conditions of its grants to require all grantees to notify NSF of any significant problems relating to the administrative or financial aspects of a grant. Early notification of significant problems greatly increases our ability to investigate allegations of diversion and misuse of NSF funds. Early notification also increases the probability that corrective action will be taken to recover diverted or misused funds and to safeguard federal funds in the future.

FUNDS EMBEZZLED FROM NSF GRANT FOR MINORITY EDUCATION: In September 1991, NSF awarded a grant for over \$4 million to a not-for-profit organization to provide academic instruction, field trips, internships, mentoring, and career counseling to minority students. This program was

designed to recruit and retain qualified minorities in science and technological careers. In October 1991, the organization hired a finance/marketing manager to manage the NSF funds. In January 1992, the manager was fired for not performing assigned duties; in February, the organization discovered the funds from the NSF grant had been embezzled and contacted our office.

A joint NSF-OIG and FBI investigation developed evidence that the manager embezzled \$30,500 in December 1991. We also found that in 1989 the subject of our investigation had been convicted by the state of Ohio for embezzling money from a public school. The subject was serving 4 years probation for that conviction when he embezzled the NSF funds. The organization did not conduct a background investigation or have the individual bonded or insured before hiring the subject.

Based on our investigation, the state of Ohio revoked the subject's probation and issued a warrant for his arrest. The case has been referred to the U.S. Attorney's Office for prosecution, which has issued a federal warrant for the subject's arrest. In addition, our office has initiated an audit to review the organization's ability to manage NSF funds. (For further details, see page 9.)

Follow-up on Diversion Cases Reported in Previous Semiannual Report

THEFT OF NSF FUNDS FROM SCIENTIFIC **EXCHANGE PROGRAM:** We previously reported that a former program specialist for a scientific academy pleaded guilty to violating 18 U.S.C. 666, Theft Concerning Programs Receiving Federal Funds. The defendant admitted to receiving and cashing checks totaling \$105,067 from 1987 to 1991. On November 15, 1992, the defendant was sentenced to 6-months imprisonment. Upon release from incarceration, the defendant will be on supervised release for 3 years, be confined in his home for 120 days, and pay \$105,067 in restitution.

FRAUDULENT USE OF GRANT FUNDS: We reported that a professor of electrical engineering at a major university and 4 of his relatives were indicted on 23 counts of filing false statements, mail fraud, and conspiracy to defraud the U.S. government. On February 5, 1992, the U.S. Attorney for the Central District of California filed a superseding indictment charging the defendants with 37 counts of conspiracy, mail fraud, false statements, money laundering, and engaging in monetary transactions with proceeds from criminal activities. On February 24, 1992, the

professor pleaded guilty to two counts each of false statements, mail fraud, and conspiracy. On the same day, three of the professor's relatives pleaded guilty to one count of conspiracy each. Charges were dropped against the fourth relative. Sentencing has been set for May 4, 1992.

Pursuant to a plea agreement, the professor has agreed to pay \$1.75 million in restitution. NSF is expected to recover over \$297,000 in NSF grant funds that were fraudulently diverted by the defendants. OIG has recommended that NSF debar the professor from receiving federal research grants and cooperative agreements for a 5-year period.

MISUSE OF GRANT FUNDS: We reported that we investigated allegations concerning a principal investigator on NSF grants to a major university, but we found no criminal actions. However, we concluded that NSF grant funds were misused and recommended that the university return the unused grant funds. Based on our investigation, the grant was terminated and \$29,473 of unused grant funds was returned to NSF. In addition, the university returned an additional \$11,217 of misapplied grant funds. (See Semiannual Report No. 5. page 14.)

CONFLICT-OF-INTEREST ALLEGATIONS

Actions Benefitted Employee's Spouse

We received an anonymous allegation that an NSF employee had influenced contracts in favor of one NSF contractor. Allegedly, the NSF contractor regularly hired the employee's spouse as a subcontractor.

Under 18 U.S.C. 208 and 216, an employee may be liable for criminal and civil penalties for participating in contracts in which his or her spouse has a financial interest. Employees who participate in matters in which they have knowledge of a financial interest, including a financial interest held by their spouse, can be punished by imprisonment for not more than 1 year for each violation. Willful participation in matters where an employee has a financial interest is punishable by imprisonment for not more than 5 years for each violation. In addition, the employee may be subject to a civil penalty of not more than \$50,000 for each violation or the amount of compensation which the person received, whichever amount is greater. NSF may also impose administrative sanctions, including termination of employment.

Our investigation disclosed that the employee first participated in a contract with

the NSF contractor in March 1988. From June 1988 through October 1991, the employee's spouse worked as a subcontractor for the NSF contractor. During that period. the employee participated personally and substantially in contracts totaling \$176,491 with this vendor. The employee's spouse received at least \$27,377 for subcontract work performed for the contractor during the same period. The employee's spouse received \$13,703 for working as a subcontractor on 18 NSF contracts.

The employee participated personally and substantially in eight of the NSF contracts in which the employee's spouse received \$6,739 for working on the eight contracts.

We found that the employee had violated conflict-of-interest statutes and federal acquisition regulations governing small purchases. In addition, the employee had taken several other questionable actions that favored the NSF contractor. We determined that the employee's supervisors, the Division Conflicts Officer, and the Office of General Counsel did not have knowledge of the employee's conflict of interest.

We concluded that the employee personally and substantially participated in contract actions with the

contractor while knowing that the employee's spouse, as a subcontractor, had a financial interest in those contract actions. On this basis, we referred our report to the U.S. Attorney's Office for possible criminal or civil prosecution. While the U.S. Attorney's Office was evaluating the case, the employee, who had been an NSF employee for over 15 years, resigned. After the employee resigned, the U.S. Attorney's Office declined to prosecute "due to mitigating circumstances, most importantly limited prosecutorial resources."

OVERSIGHT ACTIVITIES

The Office of Oversight focuses on the scienceengineering-educationrelated aspects of NSF operations and programs. The Office conducts and supervises compliance, operations, and performance audits as well as investigations of NSF's programs and operations. It handles all allegations of nonfinancial misconduct in science, engineering, and education and is beginning studies on the problem of misconduct. The Office oversees the operations and technical management of approximately 200 NSF programs, undertakes inspections, and performs special audits and studies.

TABLE 4				
	FY 1991 Last Half	FY 1992 First Half		
Active Cases From Prior Period	40	49		
Received During Period	20	23		
Closed Out During Period	11	12		
In-Process at End of Period	49	60		

MISCONDUCT IN SCIENCE AND ENGINEERING

From January 1, 1989, to the close of this reporting period, OIG received 120 allegations of misconduct. Of these, we have closed 60 cases. NSF has imposed sanctions in two of these cases and in one case that was received before 1989. All three resulted in debarments or equivalent settlements.

Table 4 shows the status of our caseload. To process this caseload, we have the equivalent of 2.5 full-time scientists and the part-time assistance of two lawyers and two investigators.

Other Serious Deviation From Accepted Practices

Offices in federal agencies that investigate misconduct allegations work from a definition of what constitutes misconduct. At NSF, misconduct is defined as (1) fabrication. falsification, plagiarism, or other serious deviation from accepted practices in proposing, carrying out, or reporting results from activities funded by NSF, or (2) retaliation of any kind against a person who reported or provided information about suspected or alleged misconduct and who has not acted in bad faith.

Definitions of misconduct are currently under serious discussion. One suggestion has been that the phrase other serious deviation from accepted practices needs to be removed or replaced. In our view, the arguments in support of this suggestion are misguided. We believe that the phrase serves an important purpose, and that

a phrase like this should be part of any working definition of misconduct.

The most common criticism of the "other serious deviations" phrase is that it is excessively vague. Scientists allegedly cannot tell what activities NSF will regard as seriously deviating from accepted practices. Therefore, goes this argument, these scientists may be subjected to misconduct investigations and sanctions for activities that they were not told NSF would treat as misconduct. A second criticism is that innovative research always deviates from what is commonly accepted in the scientific community. A literal reading of the definition would appear to label such innovative research as misconduct. A third concern is that the definition will be interpreted in such a way that scientific disagreements or unintentional errors in science will be punished by a government agency as misconduct.

We believe that the definition itself contains the answers to these difficulties. It appeals to "accepted practices," with the clear implication that within the scientific community, there are standards for acceptable and unacceptable practices. The definition is based on the assumption that when asked, the community can express its standards and can apply them to individual cases where misconduct is alleged. However, to our

knowledge, no one has ever compiled a complete list of the unacceptable practices that scientists generally recognize. In particular, no one has demonstrated that a short list like "falsification, fabrication, [and] plagiarism" exhaustively expresses those standards.

For these reasons, it is appropriate to have an openended phrase like "other serious deviations" in the definition that allows for unanticipated types of misconduct. The experience of federal enforcement offices has shown that such cases do arise and cannot be dealt with under the rubric of falsification, fabrication, and plagiarism. The misconduct regulations enacted at individual colleges and universities commonly include various other activities in their definition of misconduct. An open-ended definition also makes it possible to allow for differences in the practices of different scientific disciplines and different research institutions when dealing with a given misconduct allegation.

Such a definition clearly requires that there be a way of ascertaining the accepted practices of the relevant community of scientists in connection with a specific misconduct case. Actually, in our cases, we have not had disputes with the accused parties over what is covered by the "other serious deviations" phrase.

If such a dispute were to arise, the case would ordinarily be sent to the subject's institution for investigation. An investigating panel of scientists at the institution would have the first opportunity to consider whether what occurred was a serious deviation from accepted practices in science. A second level of consideration would be given by our scientific staff when it reviewed the university's report.

However, only NSF's Deputy Director can decide that there was misconduct and impose a sanction, and this must be done through an adjudicatory process. (See Semiannual Report to the Congress, No. 5, pp. 29 & 30.) No misconduct case at NSF has vet gone through the full hearing process. If there were a dispute over the application of the "other serious deviations" clause in such a case, the Director's Office would use the judgment of experts in the relevant fields of science in reaching its decision.

Therefore, the answer to the first criticism is that NSF is not enforcing standards that are unknown to the working scientist. Rather, NSF will take action only against activities that scientists themselves would generally recognize as culpable.

The second criticism was based on the premise that innovative research as such

deviates from accepted practices. From the above discussion, it is clear that this is not true. The scientific community recognizes innovative research as acceptable and even praiseworthy. While such research involves some kind of break with the past, this does not amount to a deviation from what scientists regard as acceptable practice.

The third criticism concerned the punishment of scientific disagreements or unintentional errors. NSF addressed this issue explicitly last year when it amended its misconduct regulations in the Federal Register:

Ordinary errors, ordinary differences in interpretations or judgments of data, scholarly or political disagreements, personal or professional opinions, or private moral or ethical behavior or views are not, and could never be considered to be, misconduct under this definition. (56 Fed. Reg. 22287 col. 2 [May 14, 1991].)

As a matter of law, therefore, NSF's definition of misconduct in science could not be interpreted to include technical disagreements or unintentional errors. Further, as noted above, NSF's definition of misconduct is based on the practices accepted or rejected by the scientific community. Scientists recognize that the possibility of errors and disagreements is

intrinsic to the practice of scientific research, so that simply making an error or being involved in a disagreement is not misconduct. In fact, an error or disagreement in research is not a sufficient basis for initiating a misconduct case.

SIGNIFICANT MISCONDUCT CASES

Plagiarism In a Southern State University

We received an investigation report and supporting documents from a large southern state university for a case involving substantial plagiarism by an NSF principal investigator (PI) and his former NSF-supported graduate student. The PI left the university before the allegation of plagiarism was made, and the graduate student was denied his doctorate as a result of the university's preliminary inquiry into the allegation. Because neither subject of the investigation remained at the university when the university completed its investigation, it concluded that plagiarism had occurred but did not address the subjects' culpability. The documentation supplied by the university, as well as additional material supplied by the PI, enabled us to draw our own conclusions about culpability.

Two researchers at the same university had written an article developing a set of equations for a method to approximate a solution for an engineering problem. The graduate student had obtained a pre-print of the article from one of the authors, from whom he also sought and obtained extensive explanation of the article's substance. The graduate student then rewrote the equations, changed some of the terms and used some different sign conventions, but did not change (in the judgment of the university's investigation committee and an NSF expert) the substance of the method reflected in the equations. The graduate student presented this work to the PI, who discussed it and worked with him to ensure its correctness. The graduate student did not disclose to the PI that he had originally obtained the method in a preprint of an article by the other researchers. An article setting forth this method, with some examples illustrating its utility, was submitted for publication by the PI and the graduate student, and it was published in a journal; the method also constituted a substantial portion of the graduate student's Ph.D. dissertation.

We concluded that the graduate student was solely responsible for the plagiarism of the material in the article and his dissertation, which is misconduct under NSF's regulation. We also concluded that

the PI was unaware of his graduate student's actions and had not committed misconduct. Because the graduate student has not received federal funding for more than 3 years, and has left and is not expected to return to the United States, we closed the case without recommending that NSF's Deputy Director impose a sanction.

Poor Laboratory Work, But Not Misconduct

We received an allegation of possible data falsification based on inconsistent reporting of experimental results. A proposal submitted to NSF described quantitative properties of certain prepared compounds that differed from the properties that the same PI had published a year before for the same compounds. We deferred the case to the PI's institution, a large state university in the midwest. To ensure the integrity of the PI's laboratory records, we counseled the university to obtain the records from the PI immediately and keep them secure, but accessible, until the matter was closed, and it did so. The university concluded that the PI had simply repeated his work, found the earlier results to have been in error. and reported only the corrected results in his proposal; there had been no falsification or fabrication.

After consulting experts, we were troubled by the poor research practices reflected in the laboratory records that accompanied the university's report. Chemical yields and purity levels had been reported by the PI in both the original article and the "corrected" proposal with great precision, but in fact, those figures had been arrived at by unjustified approximations based on data from impure material, the calculations of which were not recorded in any laboratory notebooks. This called into question the propriety of the PI reporting such results to a journal or submitting them to NSF in support of a grant proposal. We therefore asked the university to consider whether, in its view, the practices reflected in the laboratory records constituted "other serious deviation from accepted practices" in that particular research field, and thus misconduct under NSF's regulation.

The university reevaluated the laboratory records and data, and it concluded that there were some less than ideal procedures in [the PI's] laboratory environment and in his style of leadership that do require corrective action, which the university will oversee. Ultimately, the university concluded that there exist some irregularities associated with the experimental results being questioned, but these do not constitute misconduct as defined by the National Science

Foundation. Accompanying the university's supplemental report was a letter from the PI in which he acknowledged failure to maintain adequate standards of scientific work and reporting in his laboratory. He stated that he was instituting corrective procedures in his laboratory, and stated emphatically "that mistakes such as these will not occur again."

Although we were concerned about some of the research practices documented in this matter, we accepted the university's judgment that those practices did not constitute misconduct in science. We are also reassured by the subject's response and the preventive actions taken by the subject and the university. In light of the university's responses in this matter, we concluded that there was not sufficient evidence to establish that the subject engaged in misconduct in science under NSF's regulation, and we closed the case.

FOLLOWUP ON PREVIOUS SIGNIFICANT CASES

Large Midwestern University Finds Extensive Plagiarism

In our last semiannual report (No. 5, pp. 30-32), we described an investigation into allegations of serious plagiarism at a midwestern university. We noted the extensive plagiarism found and the pattern of activity exhibited in three uses of the plagiarized material, including its use in proposals submitted to two government agencies (the Defense Advanced Research Projects Agency and NSF) as well as an Institute of Electrical and Electronics Engineers publication. We reported that we had accepted the university's investigative report and had forwarded it with the subject's rebuttal statement to NSF's Deputy Director. We recommended that the subject be debarred for 3 years.

Since our last report, the Deputy Director has fully adjudicated this matter. He accepted our recommendation and sent the subject a detailed proposed notice of debarment informing him that he had 30 days in which to respond. The subject did not respond, and the proposed debarment went into effect on December 19, 1991.

The Deputy Director informed the subject by letter

that his debarment had become final. Subsequently, NSF's Office of General Counsel notified the General Services Administration that the subject had been debarred from directly or indirectly obtaining federal research grants until December 19, 1994. This case is now closed.

Plagiarism in Proposal From Small Southern University

In Semiannual Report No. 5 (pp. 32 & 33), we discussed another case of alleged plagiarism in an NSF proposal. This case was sent to the principal investigator's institution for preliminary inquiry and investigation. The institution found that the subject was guilty of blatant carelessness that constitutes a serious deviation from accepted practices within the scientific community and therefore had committed misconduct under NSF regulations. However, it considered this a significantly lesser degree of misconduct than plagiarism. We accepted the finding of serious deviation from accepted practices, but we found that the subject's actions did constitute plagiarism. Accordingly, we recommended to NSF's Deputy Director that the subject be debarred from receiving all federal grant funds for 2 years.

Since our last report, the Deputy Director accepted our recommendation and sent the subject a Notice of Proposed Debarment. The subject responded to the Notice by submitting information and arguments in opposition to the debarment. NSF has therefore offered the subject a formal public hearing, which has not yet been scheduled.

CONFLICTS OF INTEREST

Cases Involving Post-Employment Restrictions

During the reporting period, we evaluated several cases of possible violations of federal statutory or NSF post-employment restrictions. These restrictions prohibit former employees from representing anyone (including themselves) in dealing with any NSF official on any proposal, project, or other matter for 1 year, 2 years, or permanently, depending on their former NSF activity. Former employees under post-employment restrictions may submit proposals to NSF, as principal investigators, provided they nominate a substitute negotiator.

 In one case, our investigation found that a former NSF employee, within 1 year after leaving NSF and with the encouragement of NSF staff, accompanied a state governor to a meeting with NSF officials and submitted a

proposal to NSF without nominating a substitute negotiator. We found that, in processing the proposal, the responsible program officials missed the computerized notification that should have alerted them to the fact that the project director for the proposal was a former NSF employee still under the 1-year rule. We concluded that the former employee did not attempt to influence NSF officials by his actions, and we counseled the responsible program officer and division director on their responsibility to identify conflict situations and take immediate action.

• A second case involved a permanent, statutory restriction on post-employment representational activity. We found that a former employee, before retiring, had requested and followed advice from the NSF conflicts counselor in anticipation of working on a project with which he had been involved as an NSF employee. However, in a renewal proposal for this project, when the former employee became a principal investigator, no substitute negotiator was nominated. Our investigation concluded that the former employee had not violated federal statutes relating to conflicts of interest and resulted in the appointment of a substitute

negotiator to ensure that financial negotiations do not occur between the former employee and NSF staff.

Although our review of these cases did not discover serious violations of postemployment restrictions, they did result in a heightened awareness of the continuing need for conflicts-of-interest education and enforcement.

OVERSIGHT OF NSF PROGRAMS

No Discrimination in Panel Review

We received an allegation that a proposal review panel in the Directorate for Biological Sciences (formerly Biological, Behavioral, and Social Sciences [BBS]) had discussed irrelevant information about a PI's medical disability and, on the basis of that improper discussion, had decided not to fund the PI's proposal, which was otherwise highly rated on its scientific merits. We regarded this allegation very seriously because the integrity of the peer review process is fundamental to the scientific enterprise and because of a possible violation of the Rehabilitation Act of 1973.

We reviewed the proposal file and talked to the cognizant NSF program staff and most of the members of the review panel. We found that on a

previous NSF grant, the PI had obtained extensions on the grant's termination date because of hospitalization. In the "Results From Prior NSF Support" section of the proposal, the PI discussed the effect of the illness on work under the previous grant and explained that a new treatment had rendered the PI "virtually symptom-free" and fully able to work. The panel discussed this matter only briefly, and one panelist did mention, based on personal knowledge, the specific nature of the PI's medical condition. The consensus of the panel members, however, was that the discussion focused on the PI's recovery, which the PI had presented in the proposal, and the conclusion of the discussion was favorable regarding that issue. Further, we found that the panelists' reviews, written before the panel meeting, consistently placed the scientific merit of the proposal below the levels the program was able to fund. Subsequently, a proposal the PI submitted to another program was funded. In part, this award was supported by the BBS program.

We concluded that there had been an improper comment on the nature of the PI's illness by one panel member in the discussion of the subject proposal, but that it had no effect on either the conclusion of the panel discussion or the funding decision regarding the proposal; accordingly, we

closed this case. We spoke with the NSF division director for this program, and he told us he would emphasize to his program staff the importance of keeping panel discussions focused on the scientific issues and the information in the official administrative record.

Recovery Of Funds From An Eastern University

NSF awarded a grant to an eastern university specifically to acquire a multi-user research instrument for departmental faculty members, graduate students, and postdoctoral associates. NSF's program announcement specifies that only shared-use instruments should be requested. It came to our attention that one of the four designated faculty users of the research instrument left the university and arranged to take the instrument with him to his new institution.

Our review disclosed that (1) the faculty member had resigned his position 1 month before NSF awarded its grant but did not inform NSF; (2) the grantee university had purchased the multi-user instrument almost 4 months before the effective date of NSF's award, which exceeds the allowed 90-day advance purchase period; (3) the grantee university transferred the same instrument to its former faculty member's new university 1 month after

purchase, which violates the shared-use condition; and (4) the grantee university was seeking approval from NSF to transfer its departmental instrument 4 months after the actual transfer had occurred rather than before transfer.

OIG met with the cognizant program officer and the grants officer to ascertain whether NSF had completed its actions on this matter. In view of the recently received request to transfer the multiuser research instrument, all agreed that NSF had not yet completed its action.

Subsequently, the grantee university told NSF that it had received \$90,000 for the instrument from the former faculty member's new university. The grantee university said that its former faculty member's new research program needed this instrument. The grantee university could do without the instrument by employing other techniques available in the department or using instruments outside the department, as necessary, to conduct the proposed research and educational tasks. This would be accomplished by using the funds paid by the new university for the transferred instrument.

Since the conditions of NSF's multi-user research instrumentation program were not met, DGC has initiated action to recover the full \$88,633 NSF granted to

purchase the multi-user instrument.

Funds Recovered As A Result of Misconduct Inquiry

We received an allegation from a PI at a midwestern university that a faculty colleague had plagiarized his proposals. The complainant later alleged that he was losing his university post in retaliation for bringing this allegation.

During our inquiry into these misconduct allegations, we found that the university had given the PI a written notice of non-reappointment 1 year before the alleged plagiarism occurred. Therefore, this was not retaliation against a good faith whistleblower who reported plagiarism.

In connection with the complainant's nonreappointment, the cognizant NSF program officer in the Directorate for Computer and Information Science and Engineering received a letter from the university nominating substitute PIs to replace the complainant on the NSFfunded project. The NSF program officer denied the university's request because the background and expertise of the substitute PI and co-PI were not appropriate for the project.

During our review, we examined the complainant's grant jacket, and found a letter from the awardee university stating its intention to return the unspent grant funds to NSF. We found that the program officer failed to initiate termination-of-award procedures, and NSF had not yet recovered the unspent funds. We advised the program officer to terminate the award so that DGC could properly close out the grant and recover the unspent funds. Subsequently, DGC informed us that the grant was terminated with recovery of \$50,738.

Cost Sharing on NSF Equipment on Way to Resolution

In our last semiannual report (No. 5, pp. 35), we discussed a potentially serious problem regarding a university's failure to meet the terms and conditions of an NSF equipment award: the university apparently did not provide the required (1/3) cost sharing and did not purchase appropriate equipment. Because NSF had not exhausted its management actions, we directed this matter to the cognizant program officer and to the DGC for resolution. Both reviewed the matter and have informed us that the university has now fully documented how it met the cost sharing requirement, and that acceptable equipment has been purchased. NSF has

closed this matter. We took no exception to NSF's resolution.

REPRESENTATIONAL ACTIVITIES

We believe that providing information and training is an integral part of OIG's strategy to help NSF employees maintain and improve quality control, comply with rules and procedures, and prevent conflicts of interest. To inform our audiences about OIG, the Office of Oversight, along with the legal staff, provided information materials for seminars used to train new program managers, gave briefings, and participated in NSF training sessions.

During this reporting period, the Oversight Office continued its outreach activities by speaking at professional meetings. Our staff was invited to make presentations before the conference on "Maintaining & Promoting Scientific Integrity in Behavioral Science Research" at Vanderbilt University and at the "National Conference on Ethics & the Professions" at the University of Florida. A staff member also made a presentation at a session on "Integrity and Misconduct in Science," which he organized at the annual meeting of the American Association for the Advancement of Science (AAAS). The Oversight Office was also represented at

the practicum on "Responding to Allegations of Research Misconduct in the University" that followed the AAAS annual meeting. We also participated in a November 1991 AAAS/American Bar Association conference on "Misconduct in Science - Recurring Issues, Fresh Perspectives."

LEGAL ISSUES

he Counsel reports directly to the IG and provides legal advice on all OIG activities, including investigations, audits, and oversight of NSF's functions and programs. Under section 4(a)(2) of the Inspector General Act, the Counsel is responsible for making recommendations in OIG's Semiannual Report to the Congress on legislation and regulations that affect NSF-financed programs.

During this reporting period, OIG attorneys supported many of the activities that are described in other sections in this report. OIG attorneys, as part of their duties, have focused on OIG's oversight responsibilities for NSF's legal activities. In this capacity, the Counsel to the IG has commented upon actions taken by the Office of General Counsel (OGC) and other organizations within NSF in various legal fields, such as conflict-of-interest, financial, and regulatory matters. Our relationship with the General Counsel and his principal staff remains cordial and effective. Throughout this reporting period, our legal recommendations have been generally accepted by NSF.

ENFORCEMENT OF THE ANTARCTIC CONSERVATION ACT

Within NSF, OIG has principal responsibility for conducting investigations of possible violations of law relating to NSF programs and operations. While our jurisdiction to conduct such investigations is quite broad, the Department of Justice has opined that Inspectors General do not have authority to conduct "regulatory investigations," which "generally have as their objective regulatory compliance by private parties" who are not recipients of federal funds. In these situations, NSF must develop its own enforcement mechanism, and we are then responsible for reviewing the enforcement process.

At NSF, this issue arises only in regard to the agency's ability to enforce the Antarctic Conservation Act of 1978 (ACA). Pursuant to the Inspector General Act, we initiated a review of NSF's enforcement of ACA and made several recommendations for change.

ACA generally prohibits any U.S. citizen in Antarctica from: (1) harming or removing indigenous animals, (2) introducing animals or plants that are not indigenous to the area, (3) entering protected areas or sites of special scientific

interest, (4) collecting or removing native plants from specially protected areas, and (5) polluting.

NSF has authority and responsibility for enforcement of the Act, which includes possible civil and criminal sanctions. Although NSF promulgated regulations in 1989 delegating enforcement authority to its Division of Polar Programs (DPP) and authorizing the designation of enforcement officers, to date, enforcement officers have not been selected, trained, or empowered. Instead, DPP has handled ACA violations in an informal manner. This method of handling cases resulted in investigations, which have been generally fair and in keeping with the overall intent of ACA. Nonetheless, we believe the ACA requires implementation of more formal processes.

We recommended the agency ensure that at least one ACA enforcement officer is "on the ice" at all times. ACA enforcement officers should receive training at a federal law enforcement center to enable them to conduct investigations that may lead to civil penalties or criminal prosecution. An effective enforcement plan also requires the issuance of official credentials to ACA enforcement officers, and centralized recordkeeping of all reports of ACA violations in accordance with the Privacy Act. In addition, materials to educate

Antartic visitors about ACA compliance should provide information about the role of ACA enforcement officers and encourage people to report ACA violations to them.

We also recommended that: (1) NSF consider, in every case of a serious ACA violation, suspension and debarment as an additional or alternative sanction for the individuals involved and (2) modify NSF contracts, grants, and ACA permit forms to help NSF initiate enforcement actions. NSF management is currently reviewing our report.

CONGRESSIONAL HEARING ON AUDITS OF NSF GRANTS

The majority of NSF's grants support scientists who are employed at major universities. Under the Single Audit Act, audits of all federal grants at major research universities are conducted by a single agency designated by OMB. This designated agency is often referred to as the Cognizant Audit Agency. The majority of NSF grantees fall within the audit cognizance of the Office of Inspector General at the Department of Health and Human Services (HHS) or the DCAA.

On September 24, 1991, the Senate Committee on Governmental Affairs held a hearing on the effectiveness of financial oversight of NSF grants. At the Committee's request, the Inspector General testified on the work of our Office in this area.

At the hearing, the Senate Committee and GAO questioned whether HHS and DCAA audits of the universities provide adequate financial review of NSF grants. The Inspector General testified that although HHS and DCAA audit reports often contain significant findings for the government as a whole, these agencies cannot effectively address many cost and compliance issues involving NSF because they are not intimately familiar with, or particularly concerned about, NSF's unique programs and operations.

The Inspector General agreed with the Committee and GAO that OIG needs to have sufficient resources so that staff familiar with and particularly concerned about NSF programs and operations can begin to audit and inspect grant awards at large research institutions. The Inspector General noted that this is particularly important for science and engineering centers and large projects funded by NSF at universities. On this basis, the Inspector General advised the Committee that we would begin to conduct audits of NSF grants at institutions where we do not have audit cognizance. In this reporting period, we initiated a pilot project (see pages 2 and 3) to conduct audits of these institutions.

SUMMARY OF OTHER LEGAL ISSUES

NEED FOR WRITTEN ETHICS OPINIONS BY NSF ATTORNEYS: For certain types of possible conflicts of interest, NSF employees must obtain decisions from nonattorney conflicts officials who are employed by program directorates and divisions. NSF regulation requires the division conflicts officials to issue written rulings on all matters within their purview. Although these conflicts officials must give written rulings, attorneys in the OGC often give oral advice on these and other ethics issues. The oral advice given by the attorneys has sometimes been unclear or has been misunderstood by employees.

To remedy these problems, we recommended that: (1) attorneys give ethics advice in writing and (2) a formal clearance procedure be established within OGC for ethics advice. In response to our recommendations, OGC attorneys agreed to respond in writing to all written requests

for advice and to "normally" respond in writing to oral inquiries. The General Counsel also agreed to have all OGC written opinions approved by the OGC Ethics Counsellor or the General Counsel before the opinions are issued.

CERTIFICATIONS ON GRANT FORMS: Acting on our recommendation described in the March 31, 1991, Semiannual Report No. 4, NSF has initiated a process to modify its grant forms to include certifications informing the signatory that providing false information or a false claim can be a violation of criminal law.

DEBARMENT REGULATION: The agency has drafted, but not yet implemented, a regulation that would enable NSF to debar contractors who fail to comply with the government-wide procurement debarment regulation. We recommended adoption of this regulatory change in our Semiannual Report No. 4, and NSF then agreed to enact the appropriate regulation. We believe prompt adoption of this regulation is necessary to allow the agency to take appropriate action against contractors who fail to comply with procurement norms.

SIGNIFICANT AUDIT RECOMMENDATIONS FROM PREVIOUS SEMIANNUAL REPORTS

We are responsible for reporting to Congress and following up on the resolution of audit recommendations. From October 1, 1991, to March 31, 1992, 14 reports with significant audit recommendations have been resolved. These reports were noted in previous OIG Semiannual Reports to the Congress (Numbers 2, 3, 4, and 5).

"Nonprofit Organization Does Not Monitor Subcontractors"

Period First Reported: April 1, 1991 - September 30, 1991

NSF awarded a grant for \$403,058 to a nonprofit organization to improve educational programs that will help businesses obtain qualified young people. Our review disclosed that the nonprofit organization had not (1) monitored expenditures and reporting requirements for three of its subcontractors, (2) separated cash and payroll duties, or (3) supported salaries and wages with timesheets. The nonprofit organization awarded a major portion of the grant funds to subcontractors, but did not monitor the performance of the subcontractors. We questioned

\$125,714 in costs to the subcontractors.

NSF allowed \$123,359 of the questioned costs because the grantee provided levelof-effort statements that were reviewed and accepted by an NSF program officer.

"Museum Has Questioned Costs"

Period First Reported: October 1, 1990 - March 31, 1991

NSF awarded 49 grants to a natural history museum for an aggregate \$7,333,292. Claimed costs under these awards were \$5,306,944. Our audit questioned \$52,173 in costs because (1) unidentified costs were claimed, (2) some of the subcontract and related costs claimed were unsupported, (3) fringe benefits were claimed in excess of actual costs, and (4) indirect costs were claimed in excess of predetermined indirect cost rates.

As a result of the resolution process, NSF has disallowed \$45,299. NSF requested a \$42,420 refund and allowed the grantee to offset cost.

"A Majority Of Thirteen Grants to Association Have Questioned Costs"

Period First Reported: October 1, 1990 - March 31, 1991

NSF awarded 13 grants for an aggregate \$4,887,741 to a professional association. The association claimed expenditures for \$3.970.652. Our audit questioned \$768,037 of claimed costs because: (1) labor and fringe benefit costs were not supported by timesheets; (2) unallowable costs for meetings, including alcoholic beverages were charged against the grant; (3) claimed costs were not recorded on the books of account; (4) claimed costs were inadequately documented; and (5) indirect costs were claimed in excess of allowable amounts.

The grantee provided documentation to support the salaries and wages, fringe benefits, and the associated indirect costs. NSF requested and received a \$40,507 refund and allowed adjustments to financial records for the remaining \$5,352 of disallowed costs.

"Nonprofit Fails To Claim Costs In Accordance With Federal Guidelines"

Period First Reported: October 1, 1990 - March 31, 1991

NSF awarded a \$1,558,192 grant to a nonprofit organization to develop an experimental science curriculum for elementary schools. Claimed costs under the grant were \$832,726. Our audit questioned \$102,986 in costs because the organization did not comply with the cost principles and administrative guidelines required by OMB circulars.

NSF resolution officials disallowed \$77,107; the grantee will return \$47,766 in offsets and \$29,341 in payments to NSF.

"Institute Claims Unsupported Travel Costs"

Period First Reported: October 1, 1990 - March 31, 1991

A Virginia nonprofit institute received 12 awards for sponsorship, support, or travel to national and international conferences. The award budgets totaled \$603,799, and claimed costs were \$564,572. We questioned \$88,596 in costs.

NSF has disallowed \$33,212 of the questioned costs. The institute provided documentation providing support for the travel and associated indirect costs.

"Documentation Of Small Business Expenses Lacking"

Period First Reported: October 1, 1989 - March 31, 1990

NSF awarded a \$188,254 grant to a commercial corporation to develop and construct a new machine tool to make steel wire used for reinforcing concrete. Our review disclosed that the corporation did not have adequate documentation to support its claims under the grant.

NSF accepted the grantee's documentation for support of all questioned costs except \$14,191.

"Inappropriate And Unsupported Payroll Cost Ouestioned"

Period First Reported: October 1, 1989 - March 31, 1990

NSF awarded two grants for an aggregate \$406,092 to a commercial corporation. The corporation had questionable costs resulting from claims for funds in excess of expenditures and salaries for individuals who did not maintain approved timecards and who had not been included in the original projects' budget.

The company changed ownership during the resolution process, but was able to provide the final reports and additional documentation so that only \$30,209 of the original questioned costs was disallowed. NSF accepted offsets for \$13,848 and received a check for the remaining \$16,361.

"Inadequate Documentation To Support Reimbursement Claims"

Period First Reported: April 1, 1991 - September 30, 1991

NSF awarded three grants for an aggregate \$197,088 to a nonprofit organization that provides science and technology educational programs to university and high school students. Our audit questioned \$71,303 in costs and \$3,949 in unremitted interest. The audit disclosed that the grantee claimed costs not related to the grant, unallowable costs, and direct costs that were inadequately documented.

NSF has received alternative support for the inadequately supported direct costs. NSF has also disallowed \$20,373 in claimed costs and has determined that \$3,107 in interest earned is due the government.

"University Fails To Inform NSF That Grant Funds Were Misapplied"

Period First Reported: April 1, 1991 - September 30, 1991

NSF awarded two grants to a university to determine the feasibility of developing and making an electronic data base of stock market transactions available to the public.

We received an allegation that NSF funds were misapplied by the principal investigator. The university received the same allegation and conducted a detailed review. The university auditors recommended that the principal investigator reimburse the university \$35,981.

We determined that the university did not maintain proper control of the grants and that it failed to keep NSF properly informed of activities under the grant. We questioned an additional \$11,217 of costs and recommended changes in the procedural requirements under federal awards.

NSF has received a check for the \$11,217 and terminated the remaining portion of the grant thereby recovering an additional \$29,400.

"Nonprofit Fails To Correct Deficiencies"

Period First Reported: April 1, 1990 - September 30, 1990

NSF awarded two grants for an aggregate \$779,768 to a nonprofit institution, located in the southeast, to increase the number of minority students who qualify for, and complete, the study of engineering. In 1988, NSF conducted an interim audit on the first of the two grants. We questioned \$63,625 in costs. During negotiations, the grantee assured NSF that its problems had been resolved.

NSF conducted a second audit and questioned \$162,142. This amount is comprised of \$63,625 from the original audit and an additional \$98,157 of newly questioned costs. These costs were questioned because they were unsupported, not in agreement with the grantee's records, and charged to the incorrect grant.

The grantee submitted documentation to support that costs were incurred for the intended purposes. NSF reviewed the documentation and determined that the grantee's expenditures were justified. NSF allowed \$146,700 on an equity and alternative information basis, but disallowed \$18,858, which NSF requested from the grantee. OIG generally is not in favor of allowing costs on an equity basis, but in this case NSF and the grantee have given

assurance that the claimed costs were appropriate. We plan to continue reviewing the grantee's activities.

"Grantee's Claims Not Substantiated"

Period First Reported: October 1, 1989 - March 31, 1990

NSF awarded three grants for an aggregate \$375,094 to a commercial corporation in the building industry specializing in techniques for mitigating the effects of earthquakes. Our audit disclosed that 62 percent of the federal funds withdrawn had not been spent for purposes specified in the grant agreement.

NSF disallowed \$234,408 of the \$272,036 in questioned costs.

"Inadequate Documentation To Support Matching Funds Agreement"

Period First Reported: October 1, 1989 - March 23, 1990

NSF awarded two "Phase II" grants under its Small Business Innovative Research program to a privately held corporation. The corporation used the grant funds to develop an efficient process to produce various kinds of cells for medicine and research. Our report questioned \$161,870 for internal material/supply charges, computer time, and costs associated with the operation of a bioreactor.

NSF has held negotiations with the grantee and disallowed \$137,121.

"Contractor Needs To Improve Financial Policies and Procedures"

Period First Reported: April 1, 1991 - September 30, 1991

A comprehensive management review was conducted of the contractor that provides logistics and operational support to the U.S. Antarctic Research Program. NSF and OIG found a number of conditions at the contractor that required correction to ensure compliance with the terms and conditions of the contract, applicable federal guidelines, and good business practices. During this reporting period, the contractor satisfactorily addressed our concerns.

"Connecticut Museum Claims Exceed Documented Support"

Period First Reported: April 1, 1991 - September 30, 1991

Since 1987, NSF awarded five grants for an aggregate \$1,296,589 to a museum that develops and disseminates science educational materials to teachers in secondary schools. The grantee claimed \$956,289 in costs, and we questioned \$97,420.

Our audit disclosed that the grantee did not follow government guidelines, incorrectly charged payroll costs, and used funds for purposes other than intended without NSF's approval.

NSF has disallowed \$62,403 of these questioned costs and received an additional \$1,812 of interest earned on government funds.

REPORTS WITH OUTSTANDING MANAGEMENT DECISIONS

No management decisions have been made for the following 29 reports. The first 25 reports listed have questioned costs. The remaining four reports have compliance recommendations that have not been resolved. DGC is tasked with resolving recommendations in External Audit reports. During this reporting period, DGC resolved 66 of the 91 reports with questioned costs that were over 6 months old. It also resolved 17 of the 21 reports with compliance findings that were unresolved at the beginning of the period. Continued attention must be given to all unresolved reports. When a report is more than 1-year old, the resolution process becomes more difficult. Although progress has taken place in resolving outstanding management decisions on reports (see pages 4 and 5); OIG and DGC will continue to work together to bring these reports into compliance with OMB requirements.

	TABLE 5	
Audit Number	Title	Date Report Issued
Reports w	ith questioned costs:	
90-1217	ITT Antarctic Services, Inc.	05/04/90
90-1230	New York Hall of Science	05/31/90
90-1254	Discovery Learning, Inc.	08/09/90
91-1004	American Chemical Society	11/15/90
91-1035	Research Biochemicals, Inc.	12/12/90
91-1038	Prism Productions	12/21/90
91-1100	Spaceborne, Inc.	01/26/91
91-1121	Kalamazoo Area Math & Sci. Center	02/15/91
91-1124	Federal Electric Corporation (ITT)	02/25/91
91-1132	American Society of Civil Engineers	02/25/91
91-1135	National Public Radio	03/06/91
91-1137	Rangen Aquaculture Research Center	03/10/91
91-1143	Thermalon	03/25/91
91-1186	Bio-Engineering, Inc.	05/20/91
91-1197	Science Weekly	07/24/91
91-1199	Sepracor, Inc.	07/24/91
91-1200	Museum of Northern Arizona	08/06/91
91-1209	Paths/Prism	07/03/91
91-1213	American Geophysical Union	07/05/91
91-1259	State of Montana	07/03/91
91-1271	American Physical Society	08/30/91
91-1280	H.J. Degenkolb Assoc., Engineering	09/30/91
91-1281	Association for Symbolic Logic	09/24/91
91-1286	Moshman Associates, Inc.	09/30/91
91-1287	National Academy of Sciences	09/30/91
Reports wi	th only compliance recommendations:	
90-1303	ITT Antarctic Services, Inc.	08/28/90
91-1276	Stanford University	09/03/91
91-1279	Society for the History of Technology	09/19/91
91-1292	Harvard University	09/30/91

The following five audits were highlighted in Semiannual Report No. 5 (April 1, 1991 - September 30, 1991).

"SBIR Grantee Did Not Comply With Government Regulations"

NSF awarded a grant for \$211,620 to a commercial company that develops, manufactures, and sells products using proprietary membrane technology.

Our audit questioned \$129,611 in costs because the company did not maintain time and effort records, did not submit progress and final project reports, and did not maintain financial records in accordance with federal requirements.

In late March 1992, NSF received records and alternative support for the questioned costs. It is expected that a site visit will be required before resolution can be completed.

"A For-Profit Organization Charged Unsupported and Excessive Costs"

NSF awarded two contracts for an aggregate \$862,224 to a for-profit corporation to collect and analyze data. We questioned \$64,038 in claims because the contractor used estimated costs

rather than actual expenditures and charged excessive costs for in-house reproduction, indirect costs, and fees.

NSF is currently reviewing documentation to determine what questioned costs to allow. Resolution is expected during the third quarter of FY 1992.

"Grantee Has Questioned Costs"

NSF awarded \$489,369 to a small business for developing and publishing a science and mathematics newsletter for elementary school teachers. Our audit questioned \$115,887 of the \$220,001 claimed costs. We questioned costs because the grantee did not develop an indirect cost proposal and claimed indirect costs in excess of allowable amounts, charged direct and consultant salaries that were not authorized or supported by written agreements, claimed costs in excess of recorded costs, and did not remit interest income to NSF.

NSF has received documentation from the grantee and has not determined what questioned costs are allowed.

"Ivy League University Fails To Comply With Conflict-of-Interest Rules"

NSF awarded a \$1,671,216 grant to a major university to support the development of a pre-college program that teaches physical science by using astronomy. Claimed costs under the grant were \$1,375,240.

Our review disclosed that the university had not followed its standard procedures in awarding a contract to a company that was owned by an employee of the project. The university violated (1) federal conflict-of-interest rules and (2) other federal guidelines, including not preparing activity reports on a timely basis, not documenting procurements, not reporting program income, and auditing the university's grant activities and subcontractors under the project.

The university and NSF have continued negotiations throughout this reporting period.

"Funds Embezzled From Nonprofit"

NSF awarded three contracts for \$4,623,495 to a nonprofit organization to develop an international exchange program for scientists. We conducted an audit after the nonprofit

discovered that one of the employees had embezzled over \$100,000 of federal funds. We found an additional \$60,672 in questioned costs.

Our audit disclosed: additional embezzled funds and associated indirect cost not identified by the nonprofit, inadequate or no documentation to support expenditures, travel costs that were neither approved by NSF nor the nonprofit, and interest earned on federal funds had not been remitted to NSF.

Negotiations between the organization and NSF are continuing, and a team of DCAA auditors is currently reviewing the organization's records to identify any other problems with federal funding and recordkeeping.

The following four audits were highlighted in Semiannual Report No. 4 (October 1, 1990 - March 31, 1991).

"Nonprofit Does Not Provide Documentation To Support Reimbursement Claims"

NSF awarded 10 grants for an aggregate \$1,998,449 to a nonprofit science society for support of in-service training workshops, travel grants, and a young scholars' partnership program. We questioned \$227,738 in costs.

Our review found that (1) documentation was not available to determine the reasonableness of consultant's fees, (2) salaries and fringe benefits were claimed at budgeted amounts rather than actual expenditures, and (3) indirect costs were claimed in excess of actual expenditures.

Final resolution has been delayed because final determinations on indirect costs and negotiations are not completed.

"Research Firm Fails To Maintain Records"

NSF awarded a \$225,000 grant to a small business involved in the delivery of unique biochemicals used in neurological research.

Auditors questioned \$89,291 for: all salaries, wages, and fringe benefits claimed; inadequate documentation to support expenditures for materials and supplies; and indirect costs claimed in excess of allowable expenditures.

Resolution of the questioned costs has been delayed. A site visit may be required before a final determination can be made.

"Commercial Firm Earns Interest on NSF Funds"

NSF awarded two grants totaling \$2,225,496 to a privately owned for-profit corporation that provides technical and scientific information to commercial television stations. Claimed costs were \$2,113,620, and we questioned \$410,338. We recommended that an additional \$21,175 of interest earned on NSF advances be returned to NSF.

The questioned costs were resulted from: salary costs not being adequately supported, a personal loan was charged to the grant, invoices supporting expenditures were not available, and indirect costs were charged at a rate higher than the actual rate or the maximum provisional rate.

The organization recently submitted additional information. A review of that documentation has delayed resolution of the report until the next reporting period.

"Commercial Company Inappropriately Claims Costs"

NSF awarded a \$205,205 grant to a commercial company to promote scientific research. Our audit reviewed \$146,791 in claimed expenditures, and we questioned \$112,065.

We recommended that NSF terminate the grant and require the company to return \$112,065 and remit \$1,700 in interest and dividends earned on NSF funds to NSF.

NSF has been involved in extended discussions with the grantee and his counsel. Extensive delays are due to negotiations, the documentation to support the negotiation has not been accepted yet, and the final agreement has not been developed. NSF may demand full payment if actions toward resolution do not occur soon.

The following two reports were first reported in Semiannual Report No. 3 (April 1, 1990 - September 30, 1990).

"Corporation Does Not Retain Documentation For Grant Expenditures"

NSF awarded a \$340,088 grant to a nonprofit corporation, which provides innovative learning experiences and opportunities for youth and adults. We questioned \$285,095 in costs because the grantee did not have adequate documentation to support its expenditures.

In this reporting period, NSF received documentation that will require staff to make a site visit before final resolution occurs, which is expected during the next reporting period.

"New York Museum Claims Exceed Documented Support"

A science museum in New York had four NSF grants totaling \$913, 713. Our audit identified \$370,958 in questioned costs at the museum resulting from: (1) costs claimed twice, (2) lack of cost sharing, (3) indirect costs claimed in excess of allowed expenditures, (4) salaries and wages that did not have after-the-fact activity reports, and (5) costs charged that lacked supporting documentation.

Because of the findings on indirect costs and the museum changing its indirect cost system, a detailed audit will be required to determine the appropriateness of the museum's indirect cost proposal. The audit should be conducted in the next reporting period.

INSPECTOR GENERAL'S DISAGREEMENT WITH SIGNIFICANT MANAGEMENT DECISIONS

The Inspector General has no disagreement with significant management decisions made during this reporting period.

AGENCY REFUSALS TO PROVIDE INFORMATION OR ASSISTANCE

During this reporting period, there were no reports made to the National Science Board of instances where information or assistance, requested under section 5(a)(5) of the Inspector General Act of 1978, as amended, was unreasonably refused or not provided.

SIGNIFICANT MANAGEMENT DECISIONS WHICH WERE REVISED

No significant management decisions were revised during this reporting period.

LIST OF AUDIT REPORTS

We issued the following audit reports and, where applicable, the total dollar value of questioned costs (including a separate category for the dollar value of unsupported costs) is listed for each report.

External Audit

Preport Number	Audit		Date	Doll	ar Value
92-1001 Tallahassee Community College 11/29/91 0 0 92-1002 University of Kentucky 11/29/91 0 0 92-1003 University of California/Riverside 11/29/91 0 0 92-1004 National Consortium for Graduate Degrees for Minorities in Engineering & Science 11/29/91 74,225 45,634 92-1005 Northeast Photoscience Co. 11/29/91 0 0 92-1006 Mount St. Mary's College 11/29/91 0 0 92-1007 South Carolina Wildlife & Marine Resources Department 11/29/91 0 0 92-1008 State of Minnesota 12/02/91 0 0 92-1009 Stratton Park Engineering Co. (SPEC) 12/02/91 0 0 92-1010 Denver Museum of Natural History 12/02/91 93.095 0 92-1011 Christopher Newport College 12/06/91 0 0 92-1012 Child Trends, Inc. 12/17/91 28,405 0 92-1013 Air New Zealand 12/26/91 34,745 </td <td></td> <td>Title</td> <td></td> <td></td> <td></td>		Title			
92-1002 University of Kentucky 11/29/91 0 0 92-1003 University of California/Riverside 11/29/91 0 0 92-1004 National Consortium for Graduate Degrees for Minorities in Engineering & Science 11/29/91 74,225 45,634 92-1005 Northeast Photoscience Co. 11/29/91 0 0 92-1006 Mount St. Mary's College 11/29/91 0 0 92-1007 South Carolina Wildlife & Marine Resources Department 11/29/91 0 0 92-1008 State of Minnesota 12/02/91 0 0 92-1009 Stratton Park Engineering Co. (SPEC) 12/02/91 0 0 92-1010 Denver Museum of Natural History 12/02/91 0 0 92-1011 Christopher Newport College 12/06/91 0 0 92-1012 Child Trends, Inc. 12/17/91 28,405 0 92-1013 Air New Zealand 12/26/91 34,745 0 92-1014 Health Research, Inc. 12/20/91 668	- Number		193000		00313
92-1003 University of California/Riverside 11/29/91 0 0 92-1004 National Consortium for Graduate Degrees for Minorities in Engineering & Science 11/29/91 74,225 45,634 92-1005 Northeast Photoscience Co. 11/29/91 16,284 0 92-1006 Mount St. Mary's College 11/29/91 0 0 92-1007 South Carolina Wildlife & Marine Resources Department 11/29/91 0 0 92-1008 State of Minnesota 12/02/91 0 0 92-1009 Stratton Park Engineering Co. (SPEC) 12/02/91 0 0 92-1010 Denver Museum of Natural History 12/02/91 9 0 0 92-1011 Christopher Newport College 12/06/91 0 0 0 92-1012 Child Trends, Inc. 12/17/91 28,405 0 0 92-1013 Air New Zealand 12/26/91 34,745 0 0 92-1014 Health Research, Inc. 12/20/91 268 0 0 92-10	92-1001	Tallahassee Community College	11/29/91	0	0
92-1004 National Consortium for Graduate Degrees for Minorities in Engineering & Science 11/29/91 74,225 45,634 92-1005 Northeast Photoscience Co. 11/29/91 16,284 0 92-1006 Mount St. Mary's College 11/29/91 0 0 92-1007 South Carolina Wildlife & Marine Resources Department 11/29/91 0 0 92-1008 State of Minnesota 12/02/91 0 0 92-1009 Stratton Park Engineering Co. (SPEC) 12/02/91 0 0 92-1010 Denver Museum of Natural History 12/02/91 93,095 0 92-1011 Christopher Newport College 12/06/91 0 0 92-1012 Child Trends, Inc. 12/17/91 28,405 0 92-1013 Air New Zealand 12/26/91 34,745 0 92-1014 Health Research, Inc. 12/20/91 42,230 0 92-1015 Risk Engineering, Inc. 12/20/91 42,230 0 92-1016 Connecticut Business & Industry Association Education Foundation	92-1002	University of Kentucky	11/29/91	0	0
For Minorities in Engineering & Science 11/29/91 74,225 45,634 92-1005 Northeast Photoscience Co. 11/29/91 16,284 0 92-1006 Mount St. Mary's College 11/29/91 0 0 92-1007 South Carolina Wildlife & Marine Resources Department 11/29/91 0 0 92-1008 State of Minnesota 12/02/91 0 0 92-1019 Stratton Park Engineering Co. (SPEC) 12/02/91 0 0 92-1010 Denver Museum of Natural History 12/02/91 93,095 0 92-1011 Christopher Newport College 12/06/91 0 0 92-1012 Child Trends, Inc. 12/17/91 28,405 0 92-1013 Air New Zealand 12/26/91 34,745 0 92-1014 Health Research, Inc. 12/20/91 668 0 92-1015 Risk Engineering, Inc. 12/20/91 42,230 0 92-1016 Connecticut Business & Industry Association Education Foundation 12/20/91 2,596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 39,894 0	92-1003	University of California/Riverside	11/29/91	0	0
92-1006 Mount St. Mary's College 11/29/91 0 0 92-1007 South Carolina Wildlife & Marine Resources Department 11/29/91 0 0 92-1008 State of Minnesota 12/02/91 0 0 92-1009 Stratton Park Engineering Co. (SPEC) 12/02/91 0 0 92-1010 Denver Museum of Natural History 12/02/91 93.095 0 92-1011 Christopher Newport College 12/06/91 0 0 92-1012 Child Trends, Inc. 12/17/91 28,405 0 92-1013 Air New Zealand 12/26/91 34,745 0 92-1014 Health Research, Inc. 12/20/91 668 0 92-1015 Risk Engineering, Inc. 12/20/91 42,230 0 92-1016 Connecticut Business & Industry Association Education Foundation 12/20/91 2,596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1020 Loma Linda University 12/20/91 0 0 <	92-1004		11/29/91	74,225	45,634
92-1007 South Carolina Wildlife & Marine Resources Department 11/29/91 0 0 92-1008 State of Minnesota 12/02/91 0 0 92-1009 Stratton Park Engineering Co. (SPEC) 12/02/91 0 0 92-1010 Denver Museum of Natural History 12/02/91 93.095 0 92-1011 Christopher Newport College 12/06/91 0 0 92-1012 Child Trends, Inc. 12/17/91 28.405 0 92-1013 Air New Zealand 12/26/91 34.745 0 92-1014 Health Research, Inc. 12/20/91 668 0 92-1015 Risk Engineering, Inc. 12/20/91 42.230 0 92-1016 Connecticut Business & Industry Association Education Foundation 12/20/91 2.596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1019 Massachusetts Microelectronic Center 12/20/91 0 0	92-1005	Northeast Photoscience Co.	11/29/91	16,284	0
Resources Department 11/29/91 0 0 92-1008 State of Minnesota 12/02/91 0 0 92-1009 Stratton Park Engineering Co. (SPEC) 12/02/91 0 0 92-1010 Denver Museum of Natural History 12/02/91 93,095 0 92-1011 Christopher Newport College 12/06/91 0 0 92-1012 Child Trends, Inc. 12/17/91 28,405 0 92-1013 Air New Zealand 12/26/91 34,745 0 92-1014 Health Research, Inc. 12/20/91 668 0 92-1015 Risk Engineering, Inc. 12/20/91 42,230 0 92-1016 Connecticut Business & Industry Association Education Foundation 12/20/91 2,596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1019 Massachusetts Microelectronic Center 12/20/91 16.843 8,274 92-1020 Loma Linda University 12/20/91 0 0 92-1021 <td>92-1006</td> <td>Mount St. Mary's College</td> <td>11/29/91</td> <td>0</td> <td>0</td>	92-1006	Mount St. Mary's College	11/29/91	0	0
92-1009 Stratton Park Engineering Co. (SPEC) 12/02/91 0 0 92-1010 Denver Museum of Natural History 12/02/91 93,095 0 92-1011 Christopher Newport College 12/06/91 0 0 92-1012 Child Trends, Inc. 12/17/91 28,405 0 92-1013 Air New Zealand 12/26/91 34,745 0 92-1014 Health Research, Inc. 12/20/91 668 0 92-1015 Risk Engineering, Inc. 12/20/91 42,230 0 92-1016 Connecticut Business & Industry Association Education Foundation 12/20/91 2,596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1019 Massachusetts Microelectronic Center 12/20/91 0 0 92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128	92-1007		11/29/91	0	0
92-1010 Denver Museum of Natural History 12/02/91 93,095 0 92-1011 Christopher Newport College 12/06/91 0 0 92-1012 Child Trends, Inc. 12/17/91 28,405 0 92-1013 Air New Zealand 12/26/91 34,745 0 92-1014 Health Research, Inc. 12/20/91 668 0 92-1015 Risk Engineering, Inc. 12/20/91 42,230 0 92-1016 Connecticut Business & Industry Association Education Foundation 12/20/91 2,596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1019 Massachusetts Microelectronic Center 12/20/91 16,843 8,274 92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 39,894 0 <td>92-1008</td> <td>State of Minnesota</td> <td>12/02/91</td> <td>0</td> <td>0</td>	92-1008	State of Minnesota	12/02/91	0	0
92-1011 Christopher Newport College 12/06/91 0 92-1012 Child Trends, Inc. 12/17/91 28,405 0 92-1013 Air New Zealand 12/26/91 34,745 0 92-1014 Health Research, Inc. 12/20/91 668 0 92-1015 Risk Engineering, Inc. 12/20/91 42,230 0 92-1016 Connecticut Business & Industry Association Education Foundation 12/20/91 2,596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1019 Massachusetts Microelectronic Center 12/20/91 16,843 8,274 92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 39,894 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1009	Stratton Park Engineering Co. (SPEC)	12/02/91	0	0
92-1012 Child Trends, Inc. 12/17/91 28,405 0 92-1013 Air New Zealand 12/26/91 34,745 0 92-1014 Health Research, Inc. 12/20/91 668 0 92-1015 Risk Engineering, Inc. 12/20/91 42,230 0 92-1016 Connecticut Business & Industry Association Education Foundation 12/20/91 2,596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1019 Massachusetts Microelectronic Center 12/20/91 16,843 8,274 92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 0 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1010	Denver Museum of Natural History	12/02/91	93,095	0
92-1013 Air New Zealand 12/26/91 34,745 0 92-1014 Health Research, Inc. 12/20/91 668 0 92-1015 Risk Engineering, Inc. 12/20/91 42,230 0 92-1016 Connecticut Business & Industry Association Education Foundation 12/20/91 2,596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1019 Massachusetts Microelectronic Center 12/20/91 16,843 8,274 92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 0 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1011	Christopher Newport College	12/06/91	0	0
92-1014 Health Research, Inc. 12/20/91 668 0 92-1015 Risk Engineering, Inc. 12/20/91 42,230 0 92-1016 Connecticut Business & Industry Association Education Foundation 12/20/91 2,596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1019 Massachusetts Microelectronic Center 12/20/91 16,843 8,274 92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 0 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1012	Child Trends, Inc.	12/17/91	28,405	0
92-1015 Risk Engineering, Inc. 12/20/91 42,230 0 92-1016 Connecticut Business & Industry Association Education Foundation 12/20/91 2,596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1019 Massachusetts Microelectronic Center 12/20/91 16,843 8,274 92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 0 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1013	Air New Zealand	12/26/91	34,745	0
92-1016 Connecticut Business & Industry Association Education Foundation 12/20/91 2,596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1019 Massachusetts Microelectronic Center 12/20/91 16,843 8,274 92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 0 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1014	Health Research, Inc.	12/20/91	668	0
Education Foundation 12/20/91 2,596 1,306 92-1017 Merit, Inc. 12/20/91 0 0 92-1018 George Mason University 12/20/91 0 0 92-1019 Massachusetts Microelectronic Center 12/20/91 16,843 8,274 92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 0 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1015	Risk Engineering, Inc.	12/20/91	42,230	0
92-1018 George Mason University 12/20/91 0 0 92-1019 Massachusetts Microelectronic Center 12/20/91 16,843 8,274 92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 0 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1016		12/20/91	2,596	1,306
92-1019 Massachusetts Microelectronic Center 12/20/91 16,843 8,274 92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 0 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1017	Merit, Inc.	12/20/91	0	0
92-1020 Loma Linda University 12/20/91 0 0 92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 0 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1018	George Mason University	12/20/91	0	0
92-1021 Marine Science Consortium, Inc. 12/20/91 30,001 5,128 92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 0 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1019	Massachusetts Microelectronic Center	12/20/91	16,843	8,274
92-1022 Industrial Management Council 12/20/91 225 0 92-1023 State of Tennessee 12/23/91 0 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1020	Loma Linda University	12/20/91	0	0
92-1023 State of Tennessee 12/23/91 0 0 92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1021	Marine Science Consortium, Inc.	12/20/91	30,001	5,128
92-1024 Foundation on Employment & Disability 12/23/91 39,894 0	92-1022	Industrial Management Council	12/20/91	225	0
	92-1023	State of Tennessee	12/23/91	0	0
92-1025 Pennsylvania State University (90) 01/07/92 4,646 0	92-1024	Foundation on Employment & Disability	12/23/91	39,894	0
	92-1025	Pennsylvania State University (90)	01/07/92	4,646	0

Audit		Date	Dolla	r Value
Report Number	Title	Report Issued	Questioned Costs	Unsupported Costs
92-1026	CHI Research, Inc.	01/07/92	0	0
92-1027	Brown University	01/07/92	0	0
92-1028	University of New Mexico	01/07/92	0	0 "
92-1029	New Mexico State University (88)	01/07/92	0	0
92-1030	New Mexico State University (89)	01/07/92	0	0
92-1031	Savannah State College	01/07/92	0	0
92-1032	Computational Physics, Inc.	01/08/92	0	0
92-1033	University of New Mexico	01/08/92	0	0
92-1034	University of California/Santa Barbara	01/08/92	0	0
92-1035	San Diego State Univ. Foundation (90)	01/08/92	0	0
92-1036	New Mexico Institute of Mining & Technology	01/08/92	0	0
92-1037	Brigham Young University	01/08/92	15	0
92-1038	Washington University	01/08/92	0	. 0
92-1039	San Diego State Univ. Foundation (88)	01/08/92	0	0
92-1040	University of Southern California	01/08/92	0	0
92-1041	A.C. Davis Senior High School	01/08/92	0	0
92-1042	Burton Technologies, Inc.	01/10/92	0	0
92-1043	Smithsonian Institution	01/10/92	0	0
92-1044	Syracuse University	01/10/92	0	0
92-1045	Smithsonian Astrophysical Observatory	01/10/92	0	0
92-1046	GMI Engineering & Management Institute	01/10/92	0	0
92-1047	Energy & Control Consultants, Inc.	01/23/92	1,542	0
92-1048	Virginia State University	01/27/92	0	0
92-1049	Santa Fe Community College	01/27/92	0	0
92-1050	University of Alaska (86)	01/27/92	0	0
92-1051	University of Alaska (87)	01/27/92	0	0
92-1052	Spelman College	01/27/92	0	0
92-1053	Corporation of Gonzaga University	01/28/92	0	0
92-1054	State of North Carolina	01/28/92	0	0
92-1055	The Ohio Academy of Science	01/28/92	68,935	3,383
92-1056	Project Oceanology	01/29/92	145	0
92-1057	Stanford University* (\$1.3 Million)	01/29/92	0	0
92-1058	Stanford University* (\$1.3 Million)	01/29/92	0	0

Audit		Date		r Value
Report Number	Title	Report Issued	Questioned Costs	Unsupported Costs
92-1059	Stanford University® (\$2.2 Million)	01/29/92	0	0
92-1060	Stanford University® (\$2.7 Million)	01/29/92	0	0
92-1061	Stanford University® (\$2.4 Million)	01/29/92	0	0
92-1062	Stanford University* (\$2.8 Million)	01/29/92	0	0
92-1063	Stanford University® (\$3.1 Million)	01/29/92	0	0
92-1064	Stanford University* (\$3.9 Million)	01/29/92	0	0
92-1065	Spire Corporation	01/30/92	62,005	0
92-1066	Clemson University	02/26/92	0	0
92-1067	University of Hawaii**	02/26/92	0	0
92-1068	University of Hawaii**	02/26/92	0	0
92-1069	University of Hawaii**	02/26/92	0	0
92-1070	University of Hawaii**	02/26/92	0	0
92-1071	The Technology Center of Silicon Valley	02/26/92	298	298
92-1072	Interfacial Sciences, Inc.	02/28/92	201	0
92-1073	Marie Selby Botanical Gardens	03/25/92	0	0
92-1074	The Science Museum of Minnesota	03/25/92	0	0
92-1075	American Educational Research Association	03/25/92	0	0
92-1076	Hope College	02/28/92	0	0
92-1077	State of Maryland	02/28/92	0	0
92-1078	Boise State University	02/28/92	0	0
92-1079	ITT Federal Electric Corp.(Antarctic Svcs)	02/28/92	0	0
92-1080	James Madison University	02/28/92	0	0
92-1081	Ocean Research & Engineering	02/28/92	0	0
92-1082	Hansen Planetarium	02/28/92	0	0
92-1083	University of Mississippi Medical Center	02/28/92	0	0
92-1084	SRI International	02/28/92	0	0
92-1085	General Electric Co./Corporate R & D Center	02/28/92	0	0
92-1086	State of California	02/28/92	0	0
92-1087	ZEI Engineering, Inc.	03/02/92	275,089	7,394
92-1088	Huntsville/Madison County Chamber of Commerce	03/04/92	4,905	0
92-1089	Georgia Southern College	03/09/92	0	0
92-1090	Georgia Southwestern College	03/09/92	0	0
92-1091	State of Oregon (88)	03/09/92	0	0

Audit		Date	Dollar	Value
Report Number	Title	Report Issued	Questioned Costs	Unsupported Costs
Number		135000		
92-1092	Murray State University	03/09/92	0	0
92-1093	University of Rhode Island	03/09/92	0	0
92-1094	Research Foundation of the City University of New York	03/09/92	o	o
92-1095	Carnegie-Mellon University & Software Engineering Institute (90)	03/09/92	0	0
92-1096	University of Maryland System	03/09/92	0	0
92-1097	National Urban League, Inc.	03/09/92	0	0
92-1098	Carnegie-Mellon University & Software Engineering Institute (87)	03/09/92	0	0
92-1099	Carnegie-Mellon University & Software Engineering Institute (88)	03/09/92	0	0
92-1100	Rand Corporation (89)	03/09/92	0	0
92-1101	Rand Corporation (88)	03/09/92	0	0
92-1102	University of Arkansas Fayetteville	03/09/92	0	0
92-1103	University of Arkansas Little Rock	03/09/92	0	0
92-1104	Virginia Community College System	03/09/92	0	0
92-1105	Delaware State College	03/09/92	0	0
92-1106	State of California	03/09/92	0	0
92-1107	State of Oregon (90)	03/09/92	0	0
92-1108	State of Kansas	03/09/92	0	0
92-1109	University of Hawaii**	03/09/92	0	0
92-1110	Idaho State University	03/09/92	0	0
92-1111	Arizona State University	03/09/92	0	0
92-1112	State of Massachusetts	03/10/92	0	0
92-1113	University of Arkansas Fayetteville (89)	₃ 03/10/92	0	0
92-1114	University of Mississippi	03/10/92	0	0
92-1115	Associated Colleges of the Midwest	03/10/92	0	0
92-1116	Pennsylvania State University (86)	03/10/92	0	0
92-1117	Delta State University	03/10/92	0	0
92-1118	Hornet Foundation	03/10/92	0	0
92-1119	Institute of Paper Science & Technology	03/10/92	0	0
92-1120	State of Washington	03/10/92	0	0
92-1121	Pennsylvania State University (87)	03/10/92	0	0
92-1122	State of Florida	03/10/92	0	0
92-1123	Mission Research Corporation (I/C)	03/16/92	361	0

Audit Report	Title	Date Report	Dol Questioned	lar Value Unsupported
Number		Issued	Costs	Costs
92-1124	Mission Research Corporation	03/16/92	161	0
92-1125	South Carolina Wildlife & Marine Resources	03/16/92	0	0
92-1126	State of Utah	03/16/92	600	0
92-1127	State of Iowa	03/16/92	0	0
92-1128	National Science Teachers Association	03/25/92	150	150
92-1129	University of Nevada System	03/16/92	0	0
92-1130	American Meteorological Society	03/25/92	0	0
92-1131	The Bakken	03/25/92	0	0
92-1132	Maine Audubon Society	03/25/92	0	0
92-1133	Ohio Center of Science & Industry (COSI)	03/25/92	0	0
92-1134	Conference Board Mathematical Sciences	03/25/92	0	0
92-1135	Roland Park Country School	03/25/92	0	0
92-1136	City of Lafayette, Louisiana	03/17/92	0	0
92-1137	Educational Film Center	03/25/92	0	0
92-1138	Sonoma State Univ. Academic Found. (87)	03/17/92	0	0
92-1139	Sonoma State Univ. Academic Found. (89)	03/17/92	0	0
92-1140	National Society of Professional Engineers	03/13/92	4,184	0
92-1141	Massachusetts Institute of Technology***	03/17/92	0	0
92-1142	Education & Resources Group	03/25/92	0	0
92-1143	Maine Science & Technology Commission	03/17/92	1,340	0
92-1144	Western Interstate Commission for Higher Education	03/25/92	0	0
92-1145	Peninsu-Lab	03/17/92	991	0
92-1146	E. T. Techtonics	03/19/92	0	0
92-1147	American Bar Foundation	03/25/92	0	0
92-1148	Human Relations Area Files	03/23/92	11,899	0
92-1149	Association for Computing Machinery	03/24/92	34,087	19,704
92-1150	Artel, Inc.	03/27/92	0	0
92-1151	Consortium for Mathematics And Its Application	03/27/92	0	0
92-1152	Los Angeles County Museum of Natural History Foundation	03/27/92	0	O
92-1153	Chicago Zoological Society	03/26/92	0	0
92-1154	Illinois State Museum Society	03/26/92	0	0
92-1155	National Public Radio	03/27/92	80	0

Audit		Date	Dolla	r Value
Report Number	Title	Report Issued	Questioned Costs	Unsupported Costs
92-1156	San Diego Society of Natural History	03/27/92	0	0
92-1157	Five Colleges, Inc.	03/26/92	85,146	0
92-1158	Review of DGC Audit Resolution	03/27/92	0	0

^{*}Ongoing indirect cost rate audits by DCAA: the dollar amounts equal NSF's share of questioned costs that will be negotiated as part of overall federal settlement.

Internal Audit

Audit Report Number	Title	Date Report Issued	Dolla Questioned Costs	r Value Unsupported Costs
92-2101	Review of NSF's Lobbying Restrictions Certifications	1/24/92		
92-2102	Review of Health Benefits Premiums Claim by HealthPlus of Maryland	2/19/92		
92-2103	Review of NSF's FMFIA Internal Control Review Process	3/25/92		
92-2104	Recommendation of Dell PCs vs. Other Brands	3/31/92		

^{**}DCAA reviews of system deficiencies.

⁸⁸⁸ Indirect cost audit conducted by DCAA; an estimated \$1.4 million in questioned costs to NSF.

OVERSIGHT

Audit Report Number	Title	Date Report Issued	Dollar Value Questioned Unsupported Costs Costs
91-3238	Conflicts-of-Interest Reviews: Intergovernmental Personnel Act Assignees Entering and Leaving, August through September 1991	11/22/91	
91-3239	Equipment Issue Resolved	09/23/91	
91-3240	Conflicts-of-Interests Reviews: Volunteers Entering and Leaving, August through September 1991	11/08/91	
91-3241	Conflicts-of-Interests Reviews: Volunteers Entering and Leaving, October 1991	11/26/91	
91-3242	Committee of Visitors: Status of FY 91 Reviews	10/31/91	
91-3243	Conflicts-of-Interests Reviews: Intergovernmental Personnel Act Assignees Entering and Leaving, August through October 1991	12/03/91	
91-3244	Conflicts-of-Interests Reviews: NSF Staff and Rotators Entering and Leaving, September 1991	03/31/92	
91-3245	Conflicts-of-Interests Reviews: NSF Staff and Rotators Entering and Leaving, October 1991	03/31/92	
91-3246	Conflicts-of-Interests Reviews: Volunteers Entering and Leaving, November 1991	12/06/91	
91-3247	Conflicts-of-Interests Reviews: Intergovernmental Personnel Act Assignees Entering and Leaving, October through November 1991	03/31/92	
91-3248	Conflicts-of-Interests Reviews: NSF Staff and Rotators Entering and Leaving, November 1991	03/20/92	
91-3249	Conflicts-of-Interests Reviews Intergovernmental Personnel Act Assignees Entering and Leaving, December 1991	03/27/92	

Audit Report Number	Title	Date Report Issued	Dollar Questioned Costs	Value Unsupported Costs
91-3250	Conflicts-of-Interests Reviews: NSF Staff and Rotators Entering and Leaving, December 1991	03/20/92		
91-3251	Conflicts-of-Interests Reviews:Volunteers Entering and Leaving, December 1991	03/27/92		
91-3252	Compliance Review of NSF Proposal Actions: 3rd and 4th Quarters FY 91	03/31/92		
92-3200	Committee of Visitors: Status of 1st Quarter FY 92 Reviews	01/15/92		
92-3201	Conflicts-of-Interests Reviews: NSF Staff and Rotators Entering and Leaving, January 1992	03/31/92		
92-3202	Conflicts-of-Interests Reviews:Volunteers Entering and Leaving, January 1992	02/24/92		
92-3203	Conflicts-of-Interests Reviews: Intergovernmental Personnel Act Assignees Entering and Leaving, December 1991 through January 1992	03/31/92		
92-3204	Conflicts-of-Interests Reviews:Volunteers Entering and Leaving, February 1992	03/25/92		
92-3205	Conflicts-of-Interests Reviews:Intergovernmental Personnel Act Assignees Entering and Leaving, February 1992	03/20/92		
92-3206	Conflicts-of-Interests Reviews:NSF Staff and Rotators Entering and Leaving, February 1992	03/31/92		
92-3207	Committee of Visitors Reviews: FY 91	03/31/92		

STATISTICAL TABLE OF INSPECTOR GENERAL

Issued Reports With Questioned Costs

The Inspector General Act Amendments of 1988 require that statistical information be presented on the number and the dollar value of recommendation questioned costs and efficiencies contained in the reports issued during the period. The following tables provide the required statistical information.

	Number	Do Questioned Costs	ollar Value Unsupported Costs
A. For which no management decision has been made by the commencement of the reporting period	91	9,951,139	2,592,831
B. Which were issued during the reporting period	33	935,998	91,271
C. Adjustments to questioned costs resulting from resolution activities	-	5,680	-
Subtotal (A + B + C)	124	10,892,817	2,684,102
D. For which a management decision was made during the reporting period	72	5,669,413	1,723,935
(i) dollar value of disallowed costs		1,744,778	N/A
(ii) dollar value of costs not disallowed		3,924,635	N/A
E. For which no management decision has been made by the end of the reporting period	52	5,223,404	960,167
Report for which no management decision was made within six months of issuance	25	4,358,767	878,476

INSPECTOR GENERAL REPORTS

With Recommendations That Funds Be Put To Better Use

	Number	Dollar Value
 A. For which no management decision has been made by the commencement of the reporting period 	-	<u>-</u>
B. Which were issued during the reporting period	2	139,371
Subtotals (A + B)	2	139,371
C. For which a management decision was made during the reporting period	2	139,371
(i) dollar value of recommendation that were agreed to by management	2	139,371
-based on proposed management action		
-based on proposed legislative action	-	-
(ii) dollar value of recommendations that were not agreed to by management	-	-
D. For which no management decision has been made by the end of the reporting period	<u>-</u>	-
Reports for which no management decision was made within six months of issuance	-	-

GLOSSARY

Questioned Cost

A cost the OIG has questioned because of an alleged violation of law, regulations, contract, grant, cooperative agreement, or other agreement or document governing the expenditure of funds; such cost is not supported by adequate documentation; or the expenditure of funds for the intended purpose is unnecessary or unreasonable.

Unsupported Cost

A cost the OIG has questioned because of a lack of adequate documentation at the time of the audit.

Disallowed Cost

A questioned cost that management, in a management decision, has sustained or agreed should not be charged to the government.

Funds to be Put to Better Use

Funds the OIG has identified in an audit recommendation that could be used more efficiently by reducing outlays, deobligating program or operational funds, avoiding unnecessary expenditures, or taking other efficiency measures.

Management Decision

Management's evaluation of audit findings and recommendations and issuance of a final decision concerning management's response to such findings and recommendations.

Final Action

The completion of all management actions—that are described in a management decision—with respect to audit findings and recommendations. If management concluded no actions were necessary, final action occurs when a management decision is issued.

Misconduct

The fabrication, falsification, plagiarism, or other serious deviation from accepted practices in proposing, carrying out, or reporting results from activities funded by NSF; retaliation of any kind against a person who reported or provided information about suspected or alleged misconduct and who has not acted in bad faith.

If you want to report or discuss confidentially any instance of fraud, waste, abuse, mismanagement, or misconduct in science, please contact the Office of Inspector General.



Assistant Inspector General for Audit (202)357-7813

Assistant Inspector General for Oversight (202)357-9458

Counsel to the Inspector General (202)357-9457



Office of Inspector General National Science Foundation Room 1241 1800 G Street, NW Washington, D.C. 20550 NATIONAL SCIENCE FOUNDATION Office of Inspector General 1800 G Street, N.W. Washington, D.C. 20550

OFFICIAL BUSINESS PENALTY FOR PRIVATE USE \$300

OFFICE OF INSPECTOR GENERAL SEMIANNUAL REPORT TO CONGRESS